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THE OIL WEEKLY

Devoted Exclusively To The Production and Transportation of Oil and Gas

Engineering News Statistics

HUGHES

No Hughes Tool Company Product is ever offered for sale—until it has proven by actual field tests to be the best product available for the purpose for which it was designed.

Hughes Tool Company's standards of material, workmanship and tests are in keeping with its recognized position of leadership throughout the Rotary fields of the world.

You can DEPEND on Hughes Tools.

ROCK BITS *and* CONES

CORE BITS

VALVES *and* FITTINGS

TOOL JOINTS

Hughes Tools sold by Supply Stores—Everywhere

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.
Midland, Texas

Main Office and Plant
HOUSTON, TEXAS

Export Offices
Woolworth Bldg.
New York City

LOUISIANA TECHNICAL PETROLEUM LIBRARY MAR 8 1931

February 27, 1931

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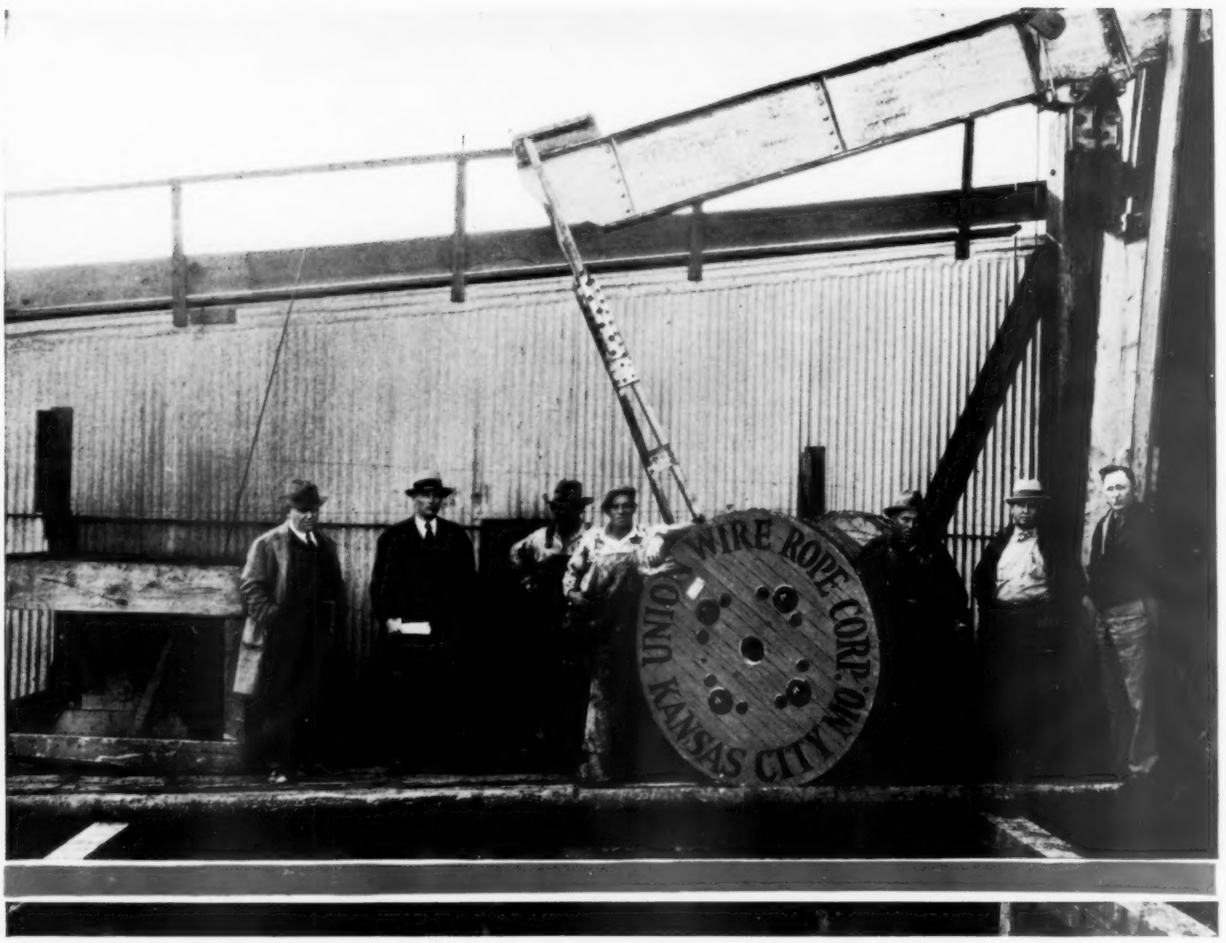


Using UNION to Cut Wire Rope Costs at Hobbs, N.M.

UNION WIRE ROPE CORE
TRADE MARK

The men in this picture, left to right, are:
H. R. (Hal) Gruber, Union Wire Rope Corp.
Bob Nix, National Security Oil Company
Walt Wise, Truck Driver
Blackie Chapman, Tooldresser, Oil Well Drilling Company
Harry Jerrens, Driller
G. C. Conrad, Oil Well Drilling Company
W. E. Cunningham, Union Wire Rope Corp.

Shown above is a well drilled at Hobbs by the Oil Well Drilling Company. Wherever you go you'll find experienced operators reducing wire rope costs by using unitormly dependable UNION Wire Lines.

UNION WIRE ROPE CORPORATION

3 North Madison Avenue, Tulsa, Oklahoma

Oil Country Sales and Export Office: 338 Kennedy Building, Tulsa, Oklahoma

Branch Office and Warehouse: Portland, Oregon — Parker Abbott, Distributor, San Francisco, California — Factory: 21st and Manchester, Kansas City, Missouri

JARECKI MANUFACTURING COMPANY

Mid-Continent and Eastern Oil Field Distributors ◆ ◆ ◆ Stocks at All Stores

UNION WIRE LINES

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879

Economical Operation

IT is when operating costs are figured most closely that the worth of GASO Pumps becomes most apparent. Correct engineering and precision building enable these pumps to perform with a minimum consumption of power and at minimum cost for upkeep and repairs.

For example — the Gaso Fig. 1508 Power Pump is made efficient and durable by such features as: Timken Roller main and pinion bearings; 98.9 to 99.4% efficient solid Herringbone gears; complete automatic lubrication with clean oil; and construction of best grade materials by men trained to the highest standards of workmanship.

Send your requirements for data on efficient and economical pumps for any purpose.

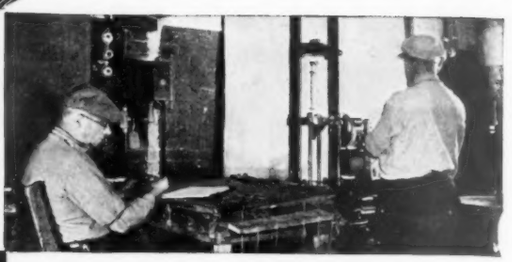
GASO PUMP & BURNER MFG. COMPANY
Tulsa, Oklahoma
Export Office: New York City

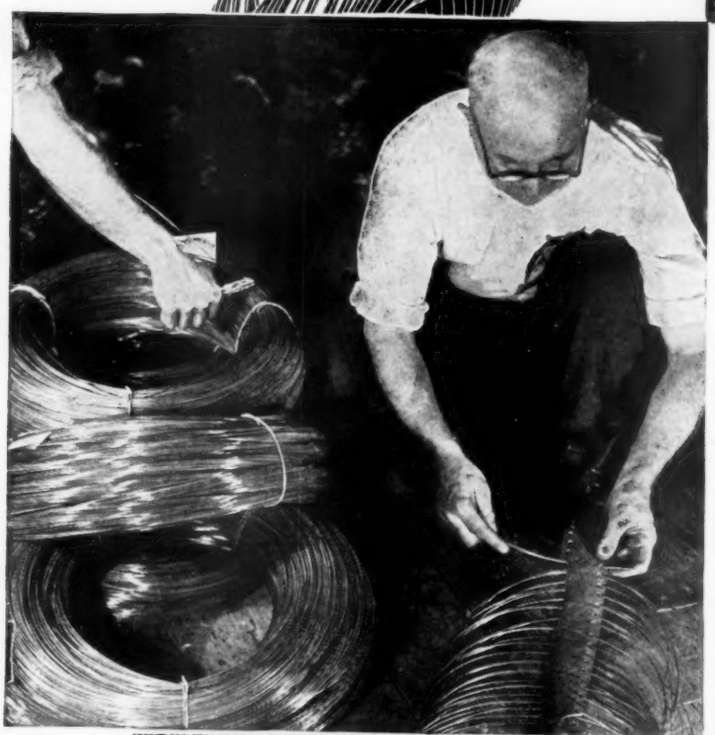
Illustration shows GASO Fig. 1508 Pump with cover removed. Capacities range from 65 bbls. per hr. at 800 lbs. pressure to 250 bbls. per hr. at 250 lbs. Arranged for any type drive.

GASO PUMPS

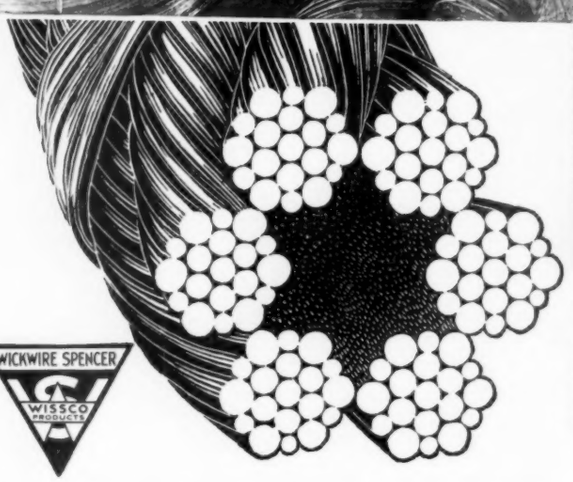
for every oil industry need

Testing *your wire rope*





YOUR wire rope?...Yes, for *every* bundle of wire that will later become a part of Wickwire Spencer Wire Rope is sampled twice. Each sample is tested independently for tensile strength, elongation and torsion. These tests are in addition to our chemical, physical and microphotographic tests that all Wickwire Spencer Wire undergoes in course of manufacture. The meticulous care with which this rope is made is reflected in the excellence of the product.



WICKWIRE SPENCER STEEL CO.
41 East 42nd Street, New York City
Buffalo Chicago Detroit Cleveland
Philadelphia Tulsa Worcester
Pacific Coast Headquarters: San Francisco
Branches and Warehouses: Los Angeles, Portland, Seattle

WICKWIRE SPENCER *Wire Rope*

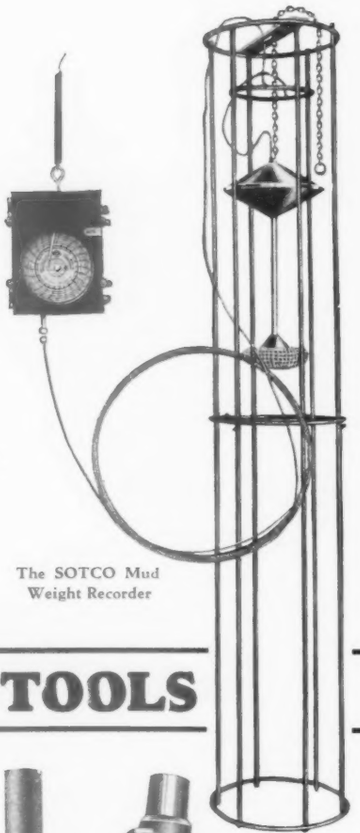
Send for our book. It is free and will prove of great value in selecting

Endorsed by Engineers and Field Men Wherever Comparative Tests Are Made

SOTCO

MUD WEIGHT RECORDER

The SOTCO Mud Weight Recorder definitely solves the mud-weighing problem, so important in modern oil well drilling. It is entirely automatic in operation, and is not dependent to any extent upon unreliable springs or other intricate mechanisms, nor upon manual manipulation. It records the weight of the circulating fluid with exceptional accuracy and is entirely dependable under all conditions of service. It is enthusiastically endorsed by engineers and field men wherever comparative tests are made. For detailed information write or wire for our new descriptive bulletin and other data.



The SOTCO Mud Weight Recorder

SOTCO ROTARY FISHING TOOLS

SOTCO Hydraulic Knuckle

SOTCO Socket

These famous SOTCO fishing tools should be standard equipment on every lease—instantly available in any emergency. They will pay for themselves in time, labor, expense and production saved on a single serious fishing job. There is a special SOTCO fishing tool for every fishing job that might occur in oil well drilling, and SOTCO tools always get the "fish." Catalog of the complete line of SOTCO tools mailed on request.

IMPORTANT

All SOTCO products will be on display at the Oil Equipment and Engineering Exposition — Los Angeles, California, March 16-22 inclusive.

SOTCO Adjustable Grab

SOTCO Hydraulic Wall Hook

SPECIALTY OIL TOOL CO.

Factory: Brea, California
Sales Offices: 507 Merritt Building, Los Angeles, California
Phones: Brea 40 — VAndike 2332

New York Office:
American Steel Export Co.,
295 Madison Ave., New York City
Cable Address: "SOTCO", Los Angeles

Imagine! 18,032 Ton Miles of Service with one set *of* AMERICAN BRAKEBLOKS

On the Matern 2-12 at Sante Fe Springs, California, owned by the Texas Company, American Brakebloks were installed at a depth of 5,964 feet. They did not have to be removed until 57 days later, at a depth of 7,163 feet. 72 round trips were made, FOR A RECORD OF 18,032 TON MILES OF SERVICE.

A Different and Better Material for Oil Well Brakes

MOST any brake materials, when new, will do a satisfactory job at the top of the hole. But American Brakebloks retain the same sort of efficiency when the hole is deep, when the going is tough, and when the material is worn down to a fraction of its original thickness. They are dependable *at every depth!*

Regardless of your operating conditions, it is safe to say that American Brakebloks WILL CUT YOUR BRAKING COSTS IN HALF! Measured in terms of Ton Mile Performance (the only accurate measurement), they will deliver twice as much service as woven or molded linings—just as they did on the Matern 2-12 described above. This they can do because they are DIFFERENT—a famous railroad brake material redesigned *especially* for oil well braking—a long life material that is kind to the flanges.

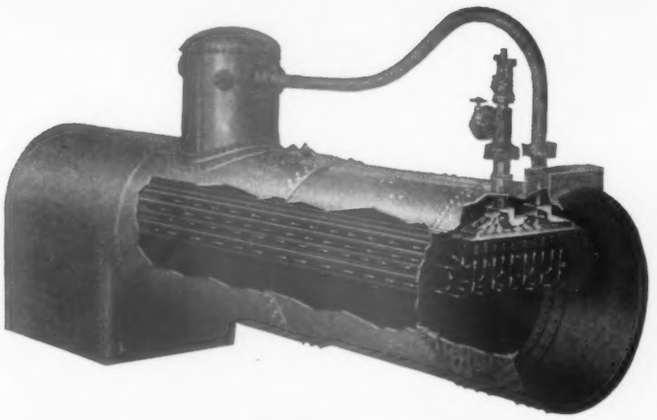
Let us give you further proof. Write now for descriptive folder and name of nearest supply house.

AMERICAN BRAKE
FRICTIONAL MATERIALS
(Leaders for 30 Years)

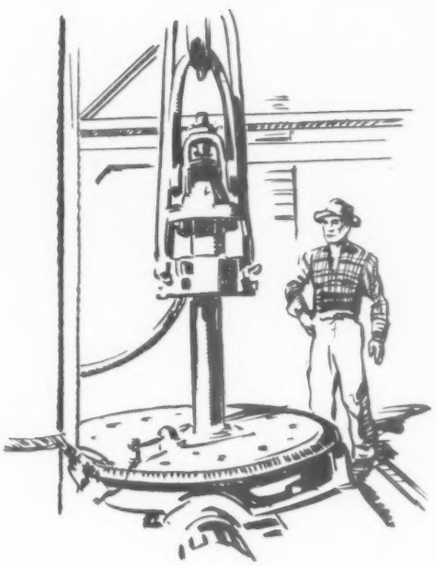
Best for Oil Well Brakes
Best for Railroad Brakes
Best for Automotive Brakes

AMERICAN BRAKE MATERIALS CORPORATION
Industrial and Automotive Division American Brake Shoe & Foundry Company
4660 MERRITT AVENUE - - DETROIT, MICHIGAN, U. S. A.
Sales Offices: 230 Park Ave., New York; 1414 McCormick Bldg., Chicago; 5309 E. Slauson Ave., Los Angeles; 74 New Montgomery St., San Francisco; 2620 Maury St., Houston, Texas. *Export Department*, 30 Water St., New York City.

AMERICAN BRAKEBLOKS
TRADE MARK REG IN U.S. AND CAN. PAT. OFF'S.



Ability to Drill *Fast* and Straight



Fast drilling calls for power—quick, snappy power instantly at command.

Straight drilling also calls for controlled power—flexible, quick acting.

Elesco superheaters increase boiler capacity by at least 25 per cent and the high temperature of superheated steam insures more uniform power reaching the cylinders of the engine and pump.

There are no line condensation troubles to contend with. No sluggish wet steam to rob the drilling rig of its power—superheating eliminates all this.

In every installation, Elesco superheaters are speeding up drilling and reducing drilling costs.

Ask your supply company for further details.

THE SUPERHEATER COMPANY

60 East 42nd Street, NEW YORK

Peoples Gas Building CHICAGO — Union Trust Building PITTSBURGH

A-566

Oil-country boilers equipped with Elesco superheaters are built by the following leading manufacturers:

The Broderick Company, Munice, Ind.
Donovan Boiler Works, Inc., Parkersburg, W. Va.
Farrar and Trefts, Inc., Buffalo, N. Y.
Kewanee Boiler Corporation, Kewanee, Ill.
Lucey Manufacturing Corp., Chattanooga, Tenn.
Oil Well Supply Co., Oil City, Pa.
The Titusville Iron Works Co., Titusville, Pa.

The coupon will bring a complete descriptive bulletin.

THE SUPERHEATER COMPANY,
60 East 42nd Street, New York, N. Y.

Gentlemen:

Please send me a copy of Bulletin T-20, "The Elesco Superheater for Oil-Country Boilers."

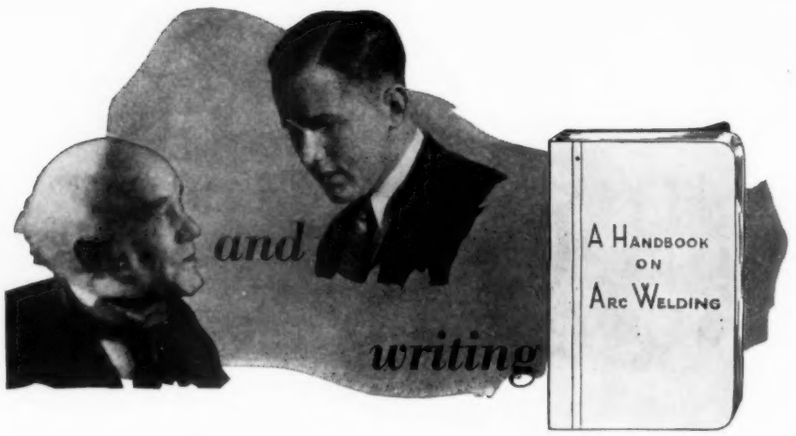
Name .....

Position .....

Firm Name .....

Address .....

OW 2-27-31



The Chapter on the

SHIELDED ARC

"I've learned something about arc welding during the last four or five years, but this SHIELDED ARC business is brand new to me.

What's it all about?"

"About the smartest development that's ever happened in welding. A Lincoln development, of course. Without going into the technical details of how it is secured, SHIELDED ARC simply means an arc which is allowed to do its best unhampered by influences which retard an unshielded arc's performance."

"But what I want to know is, what IS this shield. Is it some mechanical air-tight device?"

"No, . . . a chemical one. In a word, it is the building up around the arc of a gas area which oxygen cannot penetrate (get that word CANNOT) because when the oxygen hits the gas it isn't oxygen any more. WITHOUT that shield oxides and nitrides nestle in the weld and breed corrosion."

"What you're trying to fit on my non-technical head is that these nitrides and oxides are gangsters that are exacting toll from this welding business and that this shielded arc is as good as a police force in keeping them out."

"No, Pop, BETTER—and typically."

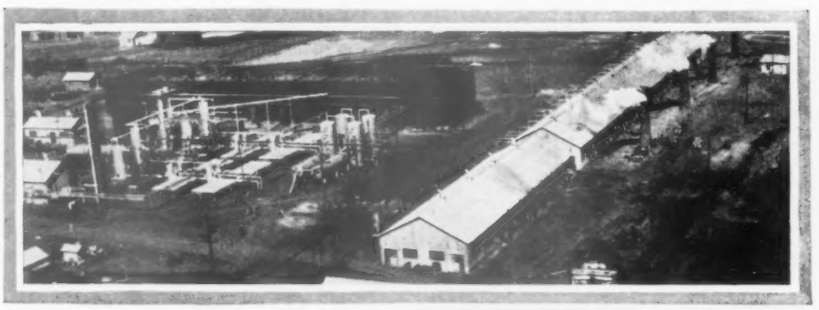
LINCOLN

A product of the largest manufacturers of Arc Welding Equipment in the World

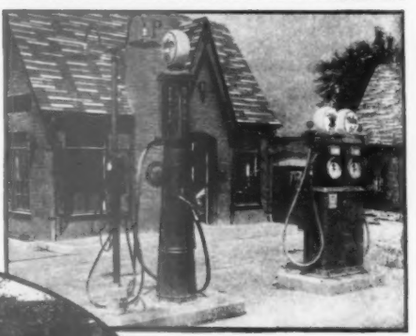
THE LINCOLN ELECTRIC COMPANY, CLEVELAND, OHIO

Why REFINERS and DISTRIBUTORS are switching to an entirely new type of Finish....

DULUX, *newest chemical development by du Pont, in three-year tests indicates 50% to 100% longer life of color, gloss, and protective film.*

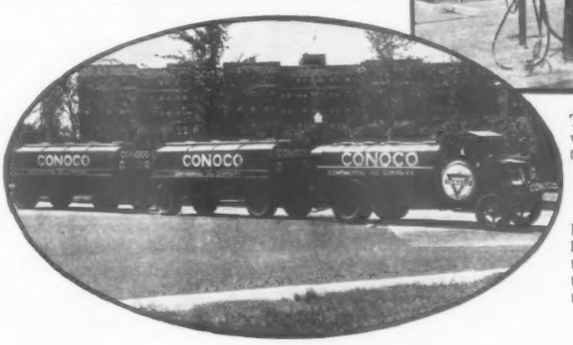


The prodigal sun—its ultra-violet rays that feed on ordinary paints—its waves of heat that evaporate gasoline—are wasted on all Dulux-covered equipment exposed to the elements.



The Phillips Petroleum Company was one of the first in the oil industry to adopt Dulux for all equipment, from refineries right down to filling stations.

• • •



Linking low distribution costs to lower maintenance costs. The Continental Oil Company profits also by the improved appearance of this prize truck and trailer train. Finished in red and white Dulux.

THREE YEARS AGO, a nameless and distinctly new chemical composition came out of the du Pont laboratories. It was sent to refiners and oil fields and paint farms all over the country. Last summer, finally perfected, it was presented to the oil industry under the name of Dulux.

Slashes Upkeep Costs

In its three years of rigid tests, this wholly revolutionary type of finish has swept aside all previous standards for the protection and decoration of surfaces. Now, refiners and wholesale and retail distributors are turning from the orthodox oil and varnish type of finish. For Dulux has cut their maintenance costs.

. white that stays white regardless of climate is ideal for service stations.

Tests Prove Worth

Dulux, tests indicated, will last from 50% to 100% longer than previously used protective coatings and will retain its color and its gloss from 50% to 100% longer. Dulux resists the deteriorating effects of paint's most dangerous enemy, the ultra-violet ray of sunlight. It protects against moisture and resists the action of petroleum solvents. Though Dulux is hard, and difficult to scratch, it is so elastic that it will not blister or crack when metals respond to heat or cold.

Add to those qualities the fact that Dulux dries quickly . . . brings property and equipment back into service with minimum time out . . . and you have a brief outline of the oil industry's reasons for adopting an entirely new type of finish. A technical bulletin explaining Dulux completely, we shall be glad to send without cost to you.

Write E. I. du Pont de Nemours & Co., Inc., Dept. M2, 1616 Walnut Street, Philadelphia, or 351 California St., San Francisco.

DU PONT

DULUX

THE GREATEST CHEMICAL DEVELOPMENT SINCE DUCO

33 rod jobs, 11 tubing jobs and 150 miles of travel—

monthly average for 6 months, without repairs!

Up to January 27, 1931—with the equipment still good for many months' service—such was the record of this McCormick-Deering Model 20 Tractor mounted heavy-duty, front-end

SAMSON ALL STEEL HOIST

This powerful mobile unit is representative of the savings of time, labor and money afforded by the Resistcor Line.

We specialize in the manufacture and distribution of modern equipment for pipe line, oil field and general industrial service.

Write or wire for complete illustrated list of Resistcor Equipment.

RESISTCOR
ENGINEERING CORPORATION
TULSA, OKLA

DALLAS MEMPHIS MUSKOGEE KANSAS CITY

ANNOUNCING

NEW STORE

NOW YOU CAN MEET The NORVELL-WILDER MAN

AT THE NEW NORVELL-WILDER KILGORE SUPPLY STORE

THOROUGHBREDS: A quotation from the Bean reads: "When you cluck to a thoroughbred he gives you all the speed, strength of heart and sinew in him. When you cluck to a jackass, he kicks."

NORVELL-WILDER MEN have the thoroughbred spirit. When you want something quick, cluck to a Norvell-Wilder man and you see if he doesn't give you all the speed, strength, and heart that is in him. And Oil Men know that such quick assistance often saves the thousands of dollars invested in a well. This old supply organization will give you the dependable products and service on which it has built its reputation. WHEN AN EXTRA EFFORT IS NEEDED IN ORDER TO MEET AN EMERGENCY . . . . CALL A NORVELL-WILDER MAN.

Norvell-Wilder *Supply Company*

BEAUMONT HOUSTON SHREVEPORT FORT WORTH
REFUGIO KILGORE

Proration Questions ▲ ▲ ▲

▲ ▲ *Reid Band Wheel Powers Answer*

The field umpire says, "Curtail!"

Producers abandon old wasteful practices in favor of the soundest operating methods they can find.

Under pressure from above, field superintendents and lease men, endeavoring to cut output costs to a minimum, send up a cry for band wheel powers.

Reid Band Wheel Powers, already time-tested and proved, fit very naturally and easily into the new order of procedure, for they are designed and built to operate efficiently at all times.

So, Proration, in starting a search for efficiency, raises questions at every turn, and when it comes to actual well pumping, Reid Band Wheel Powers answer.

Reid

Band Wheel Power with 20-ft. diameter wheel and 20-inch throw eccentrics

Joseph Reid Gas Engine Company, Oil City, Pa.

MANY a "Caterpillar" driver has a warm spot in his heart for the sturdy tractor that so willingly obeys him—"a pullin' fool" is a real tribute to the motor's extra power and tracks that fear no sand or mud. Up in the British Columbia oil fields, this Thirty is working double shifts—tireless, eager and responsive. You'll find whole fleets of "Caterpillars" on the operations of great companies—and many times one machine has played a useful part in bringing one wildcat well to production.

Prices—f. o. b. Peoria, Illinois

TEN	$1100	TWENTY . .	$1900
FIFTEEN . .	$1450	THIRTY . .	$2375
SIXTY	$4175		

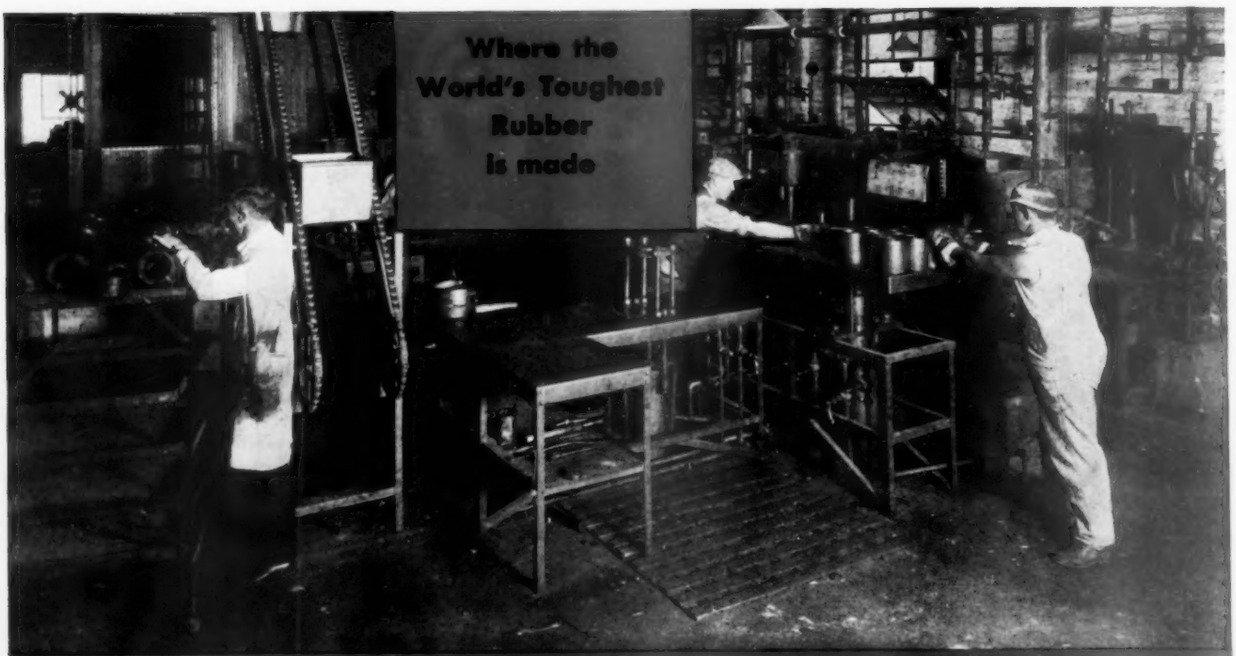
Caterpillar Tractor Co.

PEORIA, ILLINOIS, U. S. A.

Track-type Tractors Combines Road Machinery

(There's a "Caterpillar" Dealer Near You)

CATERPILLAR
REG. U. S. PAT. OFF.
TRACTOR



THE CURING ROOM IN THE BETTIS FACTORY

for drill pipe duty, a different curing process was developed

In order to manufacture a rubber capable of resisting the terrific strains imposed in rotation of the drill pipe, Bettis engineers developed a distinctive curing process. The rubber, after being specially compounded, is molded and cured under pressure in accurate molds. The rubber for each product is carefully weighed so that uniformity of cure and pressure is maintained. The extreme care and the processing necessary to manufacture the toughest of rubber adds to the cost of the product, but this extra investment is repaid many times by the increased service in the wells. Ask for Catalog.

"Best bet yet"

Patterson-Ballagh Corp.,
Insurance Exchange Building, Los Angeles
Texas and Gulf Coast Distributors:
BETTIS SALES CO., 917 Merchants & Mfrs Bldg., Houston
Oklahoma Distributors:
BAILEY & BECKER COMPANY,
410 Thompson Bldg., Tulsa
New York Office: 39 Cortlandt St.

BETTIS PROTECTORS & DRILL STABILIZERS

THE ONLY "OIL SHOW" IN 1931

"The Mecca of All Oil Men"

Plan to Attend This World-Wide Event

Here will be seen the latest designs in equipment being used in drilling, production, transportation and refining. The most advanced methods will be discussed at society meetings. New inventions in tools not yet being manufactured will be on display.

This is an Engineering Exposition that is instructive throughout and that will prove of the greatest value to oil men from all over the world. It is world-wide in scope and will display equipment world-wide in application. To learn about the latest designs that have been developed to solve the ever increasing problems of the various branches of the petroleum industry—come to this Exposition.

OIL MEN

Make your plans now to attend throughout the week. Indicate on the coupon the number of tickets you desire.

MANUFACTURERS

Several good locations are still available. Show your equipment to the host of foreign and domestic buyers whom you cannot contact personally in any other way. Mail the coupon for information.

AN OPPORTUNITY

A combination of profit and pleasure as seldom presents itself is here offered. Located in the heart of the California Oil Fields, the Exposition gives the visitor an opportunity to visit these world famous fields and observe the operating methods being used.

And then—Southern California—with its mountains and ocean, its wonderful trips, its interesting enterprises —all these are available for the visitor to Los Angeles.

Arrange that trip for March 16-22, 1931. The Exposition, too, is in beautiful surroundings with new buildings to offer you the most modern facilities for the showing of oil equipment.

Admission is Free to All Oil Men

THE OIL EQUIPMENT AND ENGINEERING SECOND ANNUAL EXPOSITION

Alameda Blvd. at 131st Street LOS ANGELES, CALIF.

Oil Equipment and
Engineering Exposition,
P. O. Box 781, Vernon Sta.,
Los Angeles, Calif.

Gentlemen:—
Kindly send me:—

— Free Tickets.

☐ Complete Information about Space.

Name .....

Company .....

Address .....

EACH and every valve is tested—*then certified*

WHEN you buy a Jenkins Iron Body Gate Valve, you know what service you will get from it. Each valve is built with an extra margin of weight and strength. Cast right on the body of each are the services and working pressures in steam, oil, water, and gas for which the valve is recommended.

Each and every valve, not merely an occasional one, is put through a rigid test. Only valves that pass this test get the brass certification plate.

Jenkins Iron Body Gate Valves, standard, medium and extra heavy, flanged and screwed, are stocked at convenient points, and are obtainable through supply houses everywhere.

JENKINS IRON BODY GATE VALVES
SOLID WEDGE . . . BRONZE MOUNTED

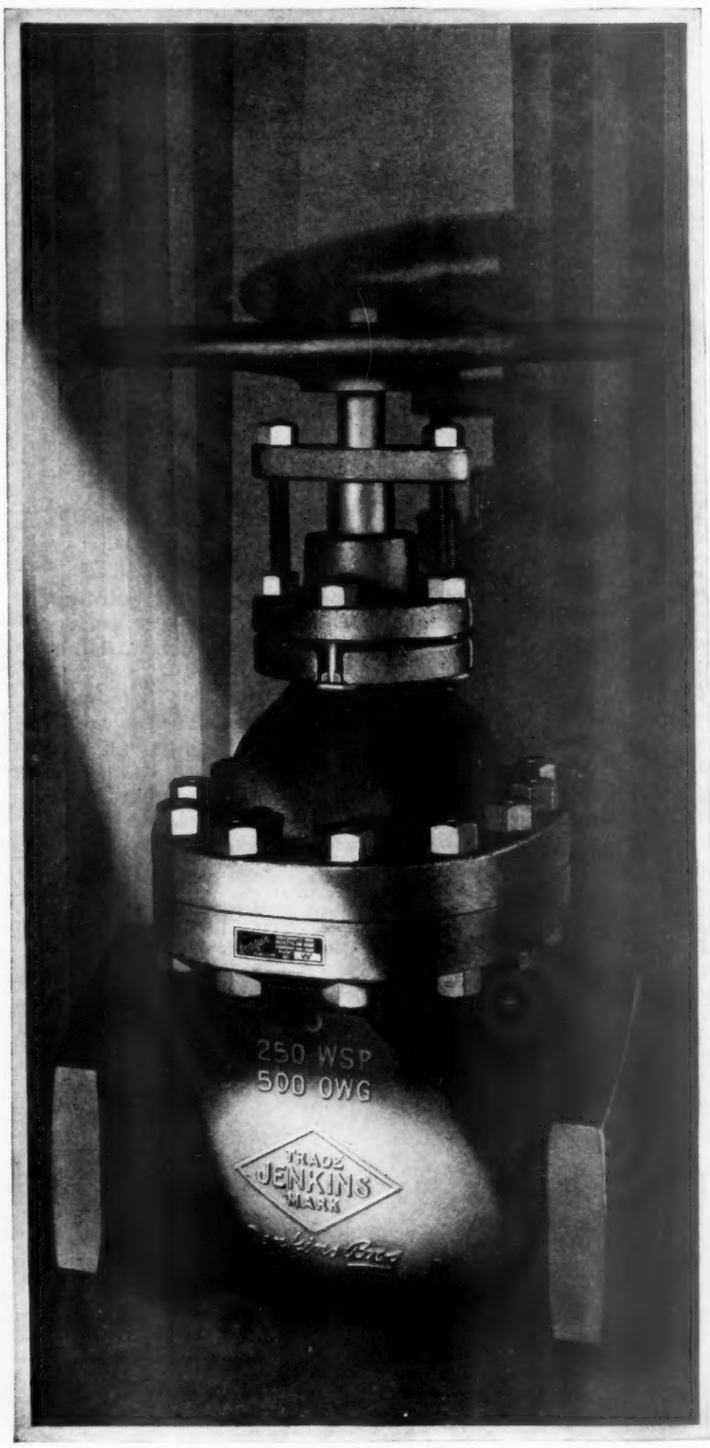
Inside Screw, Stationary Spindle; Outside Screw & Yoke, Rising Spindle (Screwed or Flanged)	Rated Working Pressure, Pounds			
	STEAM	OIL	WATER	GAS
Standard	125	200	200	200
Medium	175	300	300	300
Extra Heavy	250	500	500	500

JENKINS BROS.

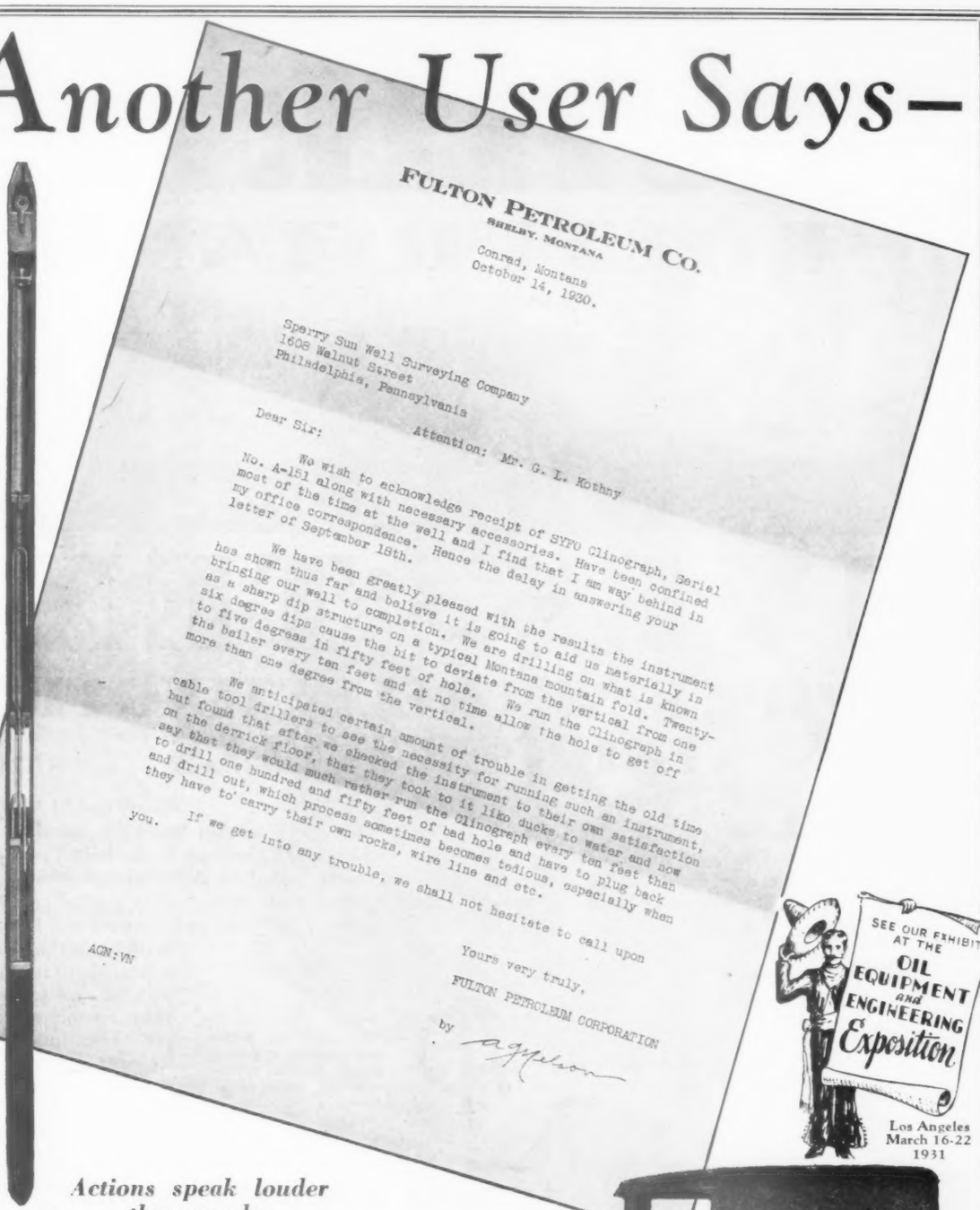
80 White Street, New York, N.Y. — 524 Atlantic Avenue, Boston, Mass. — 133 No. Seventh Street, Philadelphia, Pa.
646 Wash. Blvd., Chicago, Ill. — 1121 No. San Jacinto, Houston, Texas
JENKINS BROS., Limited, Montreal, Canada; London England
Factories: Bridgeport, Conn.; Elizabeth, N. J.; Montreal, Canada.

**Illustrated above is facsimile of certified brass plate carried by Fig. 203 a, screwed, Jenkins Extra Heavy Iron Body Gate Valve, stationary spindle, illus. at right* ➡

Jenkins VALVES
Since 1864



Another User Says—



FULTON PETROLEUM CO.
SHELBY, MONTANA

Conrad, Montana
October 14, 1930.

Sperry Sun Well Surveying Company
1608 Walnut Street
Philadelphia, Pennsylvania

Attention: Mr. G. L. Kothny

Dear Sir:

We wish to acknowledge receipt of SYFO Clinograph, Serial No. A-151 along with necessary accessories. Have been confined most of the time at the well and I find that I am way behind in my office correspondence. Hence the delay in answering your letter of September 18th.

We have been greatly pleased with the results the instrument has shown thus far and believe it is going to aid us materially in bringing our well to completion. We are drilling on what is known as a sharp dip structure on a typical Montana mountain fold. Twenty-six degree dips cause the bit to deviate from the vertical from one to five degrees in fifty feet of hole. We run the Clinograph in the boiler every ten feet and at no time allow the hole to get off more than one degree from the vertical.

We anticipated certain amount of trouble in getting the old time cable tool drillers to see the necessity for running such an instrument, but found that after we checked the instrument to their own satisfaction on the derrick floor, that they took to it like ducks to water and now say that they would much rather run the Clinograph every ten feet than to drill one hundred and fifty feet of bad hole and have to plug back and drill out, which process sometimes becomes tedious, especially when they have to carry their own rocks, wire line and etc.

If we get into any trouble, we shall not hesitate to call upon you.

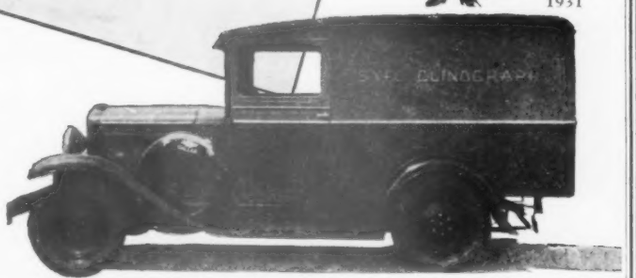
Yours very truly,

FULTON PETROLEUM CORPORATION

by

AGN:VW

Los Angeles
March 16-22
1931



Actions speak louder than words:

Reports of satisfactory service of the SYFO Clinograph continue to come in to us.

Use this modern method of well surveying to guard against drilling and production trouble.

Dallas, Texas
1504 First Nat'l Bank Bldg.
Tulsa, Oklahoma
402 Petroleum Building

Sperry-Sun Well Surveying Co.

1608 Walnut Street—Philadelphia

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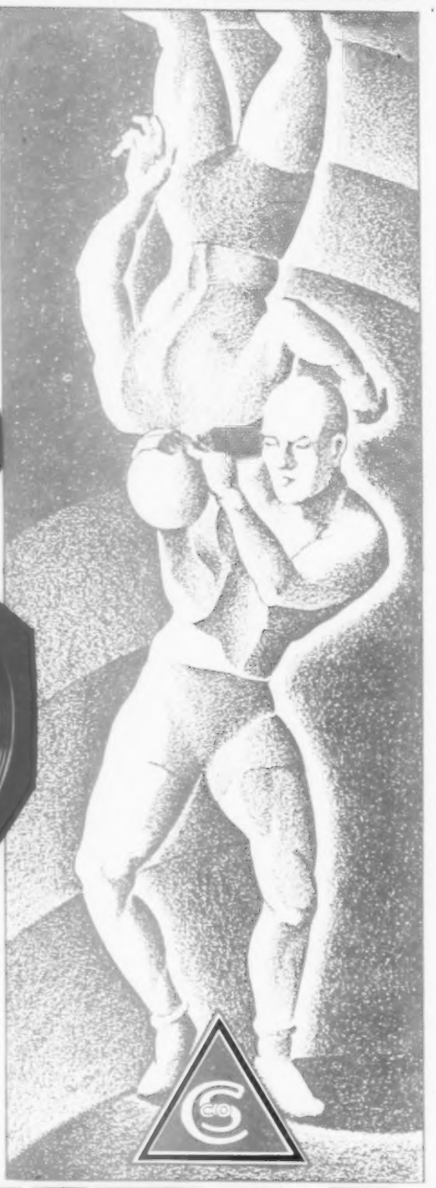

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SPENCER W. ROBINSON, EDITOR

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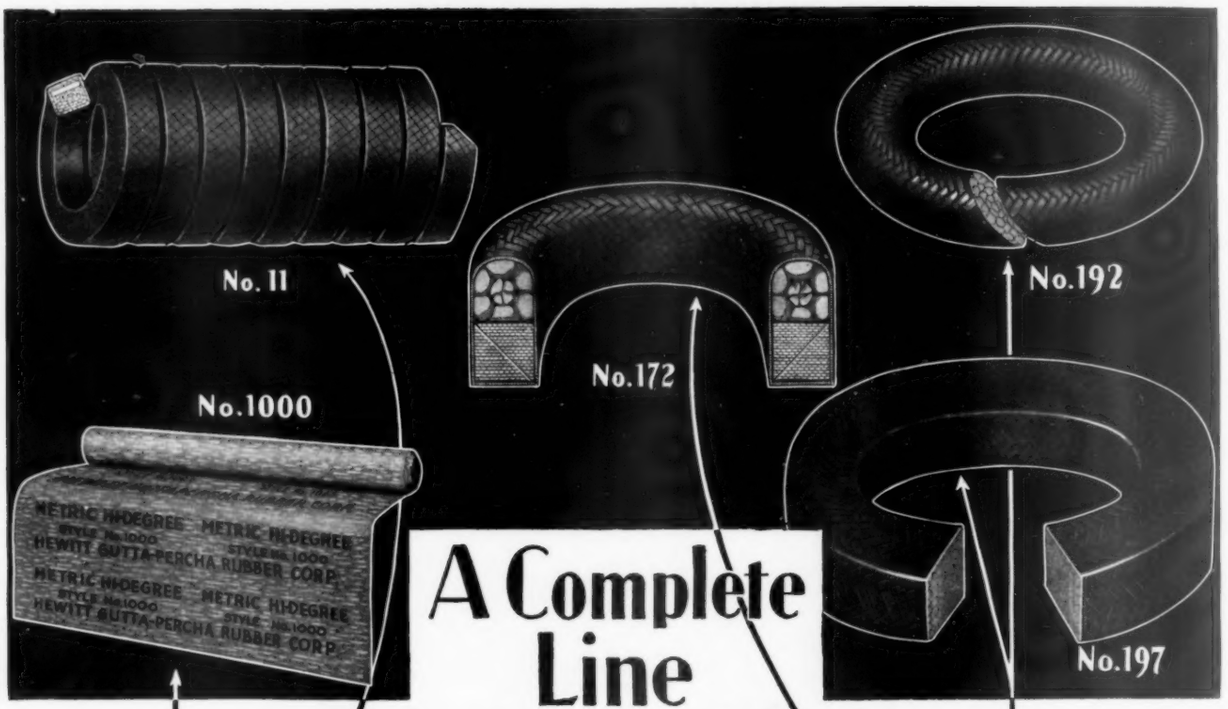

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WASHINGTON

Oil relief now linked up with fight for speakership of the house

WASHINGTON, D. C.—Intimations that the White House looked with disfavor upon abandonment by the House Ways and Means Committee of all efforts at aid the independent oil producers, and charges by democratic members from the Southwest that republicans on the committee had forced through Monday's decision to meet demands from Eastern consuming interests, Tuesday completely changed the complexion of the situation, with Speaker Longworth issuing a call for a conference of the republican members of the committee tomorrow to decide whether they would reconsider the resolution.

The situation at the capitol was laid before President Hoover today by Senator Capper of Kansas, author of the import restriction bill, and Representative Hoch of Kansas, sponsor of a bill to divorce pipe lines. While they were conferring with the president, Representative Snell, chairman of the rules committee, announced that any relief bill the ways and means committee reported would be given a rule for immediate consideration, and a delegation of members from the oil states appeared before the steering committee to demand action.

Aside from these factors the situation Tuesday took a decidedly political turn, and oil relief now is linked up with the fight for speakership of the next house which is being waged between Representative Longworth, the president speaker, and Congressman Garner of Texas. With the Republicans having no clear majority in the next house, the election of a Republican speaker is very doubtful and may depend to large extent upon personal friendships. Blame for failure to provide relief for the oil industry Tuesday night was laid squarely on the doorstep of the Republicans by Congressman Garner in a statement in which it declared that "It is evident that the Republican organization of the house is not willing to permit a report on the resolution for an investigation of the oil companies with a view of securing facts upon which to base legislation.

"The recent hearings before the ways and means committee," Garner asserted, "impressed me that the marketing end of the oil industry should be divorced from production, transportation and refining. I believe that, sufficient information has been secured without an investigation so that at the next session of congress comprehensive legislation for this purpose will be brought before the congress. Of course, if we could get all the fact in the premises, such as a thorough investigation would bring out, it would doubtless justify a more constructive and comprehensive program of legislation dealing with production, transportation, refining and marketing.

"I have been a vigorous advocate of such an investigation, and I believe the congress and the public are entitled to such information as would be disclosed. I need not add that the Mellon-Rockfeller interests apparently have sufficient control to block the investigation resolution. In fact, they seem to have sufficient power to block any relief for the independent oil producers despite the fact that the independents are conceded to be in desperate straits."

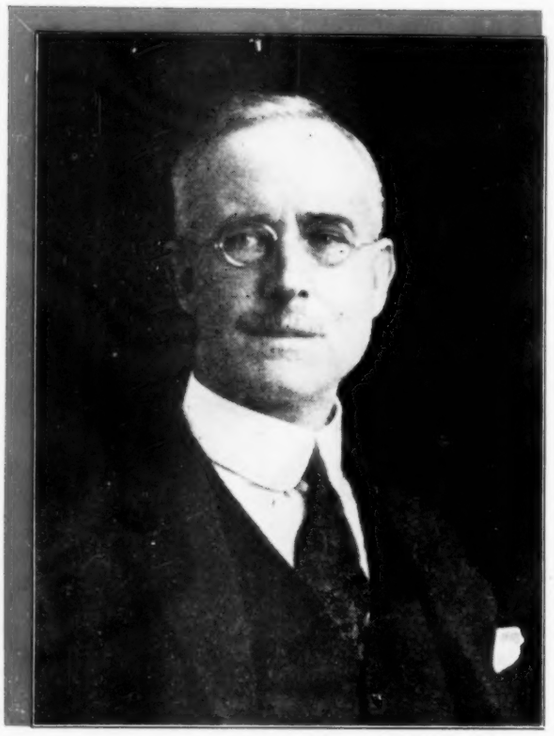
WASHINGTON, D. C.—All chances of oil legislation at this session of congress were practically eliminated Monday when the house ways and means committee voted indefinitely to postpone all tariff and embargo bills, including the Capper-Garber measure restricting imports of oil. The action of the committee also disposes of the compromise plan which the independent producers were working on, under which the Federal Trade Commission was to come to an agreement with oil importers regarding the permissable volume of oil to be permitted in free, all imports over the maximum to pay a tariff.

Unless members of congress interested in the oil situation can impress the steering committee of the house sufficiently to have a place given oil legislation, there will be no action taken during the few days which remain of the session. What the steering committee will be asked to do was not decided Monday night.

Strenuous efforts were made during Monday's meeting of the ways and means committee to have oil legislation

(*Continued on page 60*)

What Prospects Not As Yet Petroleum



A. Beeby Thompson

It is believed that there are few countries not now producing oil that ever will produce commercially, but there are interesting seepages and other signs in remote places where distance and expense have so far prevented real exploration.

THE world has been so thoroughly scoured by prospectors that there are few mineralized regions of promise which have escaped the attentions of the mining engineer. This remark applies as forcibly to petroleum as to other minerals and the greatest reserves of oil probably lie either within territory already proved, but at greater depths than hitherto reached by the drill, or along structures concealed by younger strata or alluvial deposits which do not reflect deep seated flexures. The use of geophysical methods is assisting in elucidating concealed structures and is likely to have greatly extended uses when the science has been further advanced. So far geophysical surveys are confined to areas where oil-bearing series are suspected, as the anomalies disclosed by these methods give no indication of the petroliferous character of the strata.

With the exeption of Irak, there are probably few, if any, countries likely to be great producers of oil which are not yielding oil on a moderate scale. Such countries as the United States, Russia, Persia, Venezuela, and Mexico, are likely to hold a dominating position for many years, particularly North America which is so richly endowed with oil resources. The Dutch and British East Indies may increase their supplies substantially and Colombia holds out potentialities of note, but of other producing countries Roumania alone offers prospects of a large increase of output if restriction is not enforced. Poland certainly seems to justify more attention than it is receiving, for although structures are complex and drilling difficult, the oil-bearing rocks may prove productive in many areas yet unworked. Germany, too, is now attracting the attention of those with knowledge of salt dome conditions, especially as deeper drilling on the flanks of the salt intrusions in the older fields of Hanover has led to much larger productions.

Little is yet known of the potentialities of the foothill country East of the Andes in South America. In the Argentine, Peru and Ecuador, there are prospects on the eastern flanks of the Andes which may some day develop into fields of greater importance than the Pacific Coastal fields of these countries and the small Andean fields of the first-named country.

Many countries not now commercial producers on an appreciable scale might come into prominence if the prices of oil products justified the development of low grade propositions. The phenominal results of deep drilling in the United States have discouraged oil field operators from expending efforts in exploring regions unlikely to give big outputs, especially if distant from markets.

Manifestations of oil of some kind are found in most countries. Sometimes their mode of occurrence precludes geologists from attaching anything more than academic interest to these evidences of oil; at other times the geological conditions are such as to condemn the region as a likely oil producer. Surface indications of oil must not be ignored, and these are commonly the only clue to the existence of deep seated oil rocks in new countries, but those fields not indicated by surface manifestations are likely to be deep and rare.

Africa

Oil manifestations have received the attention of technologist in the following parts of Africa: Morocco, Algiers, Egypt, Sudan, Somaliland, Mozambique, Madagascar, Union of South Africa, Angola, Congo Free State, Nigeria, Guinea Coast, Uganda and Abyssinia. Only in Egypt near the Gulf of Suez has commercial production been obtained on any important scale, but small outputs have been obtained in Algiers and Morocco. Surveys have been made in all these countries enumerated above by influential interests, and drilling has been undertaken but without success in Mozambique, Madagascar, South Africa, Angola, Nigeria, Gold and Ivory Coasts.

Along the North African Mediterranean Coastal belt occasional seepages of oil have led to drilling at many points, but the results, if not negative in character, have not been very encouraging. A small field was operated near the Port of Oran in Algiers and production has been obtained from the district of Melilla in Morocco.

Oil possibilities in the Sudan are generally considered to be confined to the narrow strip of Tertiary sedimentaries which skirt the Red Sea Coast line and cover the neighboring islands where the conditions resemble somewhat those of the littoral belt of the Egyptian Red Sea strip. Indications are slight and not very encouraging.

In Somaliland between the coast and the mountains there

In Those Areas Tested For Deposits?

By A. BEEBY THOMPSON
M. I., Mech. E., M. Inst. M. M. F. G. S.

WHEN A. Beeby Thompson, one of Europe's best known mining and petroleum engineers and geologists, was a visitor in the United States last autumn and was the guest of the publisher of The OIL WEEKLY in Houston, conversation turned to prospects for oil in those countries not now having commercial oil production. Mr. Thompson had had the privilege of having visited almost every portion of the globe and the nature of his profession was such that he had accumulated a great deal of data on prospects in various parts of the world.

As the conversation on outcrops, seepages, etc., progressed, Mr. Thompson was asked if he would write for The OIL WEEKLY something of the information he had given in private conversation. Mr. Thompson agreed to write a brief summary of the information his mind and files included, and we are pleased to present it herewith.

Accompanying the manuscript which was forwarded by an assistant of Mr. Thompson after he had left London, was a note which said that Mr. Thompson is now away from his office on a long trip to Burma and India.

The accompanying article had been planned for inclusion in The OIL WEEKLY's World Wide Review Number of January 30, but reached the editors too late for that issue.

It is with a great deal of pleasure that we present Mr. Thompson's article, written especially for readers of The OIL WEEKLY.

The Editor.

is a fairly extensive development of sedimentary beds ranging from Jurassic to Tertiary. At Daga Shabell, only some 30 miles inland from Berbera, there are seepages of oil and a series of oil sands are met with in beds of Cretaceous or Jurassic age.

The beds yield a paratfinous base oil of good quality, but the structure does not support the idea that any large field exists. No other traces of oil have been located in beds of the same age in British, Italian or French Somaliland, although search has been made.

Mozambique is being tested by a well at Inhaminga. The site is located on a very well developed anticline in the hope that oil may have concentrated. No very encouraging shows of oil have been reported from this territory.

Madagascar has continued to attract oil prospectors of international repute for many years due to an extensive development of bituminous rocks in the Sakalava Valley on the western side of the island. Oil seepages are associated with Jurassic rocks and manifestations are most conspicuous where the rocks are pierced by a network of volcanic dykes. Low dips usually prevail and strike faulting is a prominent feature. The oil may be derived from Permian rocks or be indigenous to the Jurassic, but insufficient detailed work has yet been done to say whence the oil comes and whether suitable structures occur.

Local excitement in South Africa has many times been raised by reports of oil seepages, gas issues and the finding of oil saturated sands when prospecting for coal. The Karoo series (Permo-carboniferous) of South Africa contain many coal seams and oil shales and much carbonaceous matter, and where volcanic dykes have intruded oil has been distilled from these beds, and both oil and gas have migrated into neighboring sands and fissures. This has proved to be the origin of most of the oil discoveries. The country so far investigated does not appear to hold out any important prospects.

The Portugese West African Colony of Angola has been visited many times by oil men and in recent years a great deal of drilling has been undertaken by one of the leading American oil companies under the guidance of distinguished technologists. Seepages of heavy oil and outcrops of black bituminous rocks are fairly common, but when tested on structures they have failed to give more than small quantities of a heavy black oil.

Nigeria and the Guinea Coast at one time attracted considerable notice to those concerned with petroleum and a fair amount of wells were sunk in all three colonies. The black bituminous rocks of Nigeria never yielded more than oozings of heavy asphalt at certain points, and wells sunk to considerable depth in the region of the Tano River separating the Gold and Ivory Coasts were unsuccessful in striking oil. Seepages of oil and issues of gas from a sedimentary groups of supposed Jurassic or Cretaceous beds were the incentive but they yielded nothing of commercial importance.

An interesting display of oil manifestations occurs in Central Africa along the shores of Lake Albert. These are confined to a series of sediments which fringe the lake on the Uganda and Congo Free State sides and overlap the ancient metamorphic rocks of the area. Seepages of various classes of oils at many points indicate that the oil-forming conditions were widespread, but the absence of defined structures in these sediments causes misgivings. Certain oil shows in Abyssinia have been the object of investigation, but little useful information has been made public.

America

The non-producing countries of Central America have all received repeated visitations from oil geologists of many nationalities. Fairly extensive investigations in Nicaragua, Costa Rica and Panama, have failed to lead to discoveries of any importance. The various oil seepages and other phenomena examined did not encourage much serious prospecting. Several islands in the Caribbean still appear to justify further examination, namely, Cuba, Barbados and Haiti.

Cuba has drawn a small supply of high grade oil for many years from a small field developed in Serpentine at Bacuranao near Havana and quite recently a larger producer was reported from the same district. Manifestations of oil are frequent and striking, yet nothing commercial has been found except the light oil already mentioned and asphalt which is mined in the many large outcropping veins of Grahamite. It may be that the great asphalt veins constitute a record of lost oil products rather than an indication of its present existence. Limestones of Tertiary, Cre-

taceous and Jurassic age predominate and oil shows are mainly confined to the contact zones of one of the above with Serpentine.

Barbados continues to give small output of light oil from the Turner's Hall district where many productive wells have been drilled. Highly folded and distorted strata of Tertiary age, more or less impregnated with oil, underlie the coral which covers most of the island. Where the corals have been breached by denudation the exposed underlying Tertiary beds are frequently saturated with oil, and small yields of oil can be obtained from wells sunk into these beds. A number of anticlines have been traced and their continuation beneath the limestones could be followed by systematic drilling. The island deserves, and will doubtless receive in due course, more notice from oil interests.

Hayti, Santo Domingo

Several abortive efforts have been made to develop an oilfield on this island but nothing important seems to have been discovered so far notwithstanding the occurrence of oil indications.

The Guianas

At intervals reports are circulated regarding the discovery of oil in British and Dutch Guiana. The occurrences have been confirmed but they are usually associated with geological conditions which nullify or greatly deprecate their importance. A fringe of nearly horizontal sediments overlies and transgresses the continental floor of crystalline rocks along the coastal belt of these colonies and certain horizons are undoubtedly carbonaceous and yield traces of gas and oil, but quite distinct from this series it may be that wedges of Tertiary strata separate the above-named deposits and the basal granitic rocks, and these may represent a continuation of the oil-bearing Tertiary rocks of Trinidad and Venezuela and so yield some oil under favorable circumstances.

South America

Brazil has many times been visited by oil prospectors, but although asphaltic rocks have been noted nothing very encouraging has been reported hitherto. The Andean foothill country may one day open up some prospects of importance.

Bolivia is likely to be a producer of some importance one day. A long strip of country on the eastern flanks of the Andes, north of Yacuiba is characterized by many light oil seepages. The oil is associated with a series of Jurassic and Paleozoic rocks involved in the Andean folding movement. A number of test bores have been sunk at selected spots on favorable structures and oil in quantity has been found. The interesting country runs for a distance of about 500 miles north of the Argentine frontier. Its distance from markets of any magnitude is likely to delay the commercial development of the region.

Asia

In Western Asia the only non-producing countries attracting a little interest from oil men are Turkey-in-Asia, Palestine and Arabia. Irak, owing to its proved potentialities, is likely for some time to distract serious attention from other less encouraging neighboring countries.

In Turkey the Lake Van area has been the object of some studies, and at Hora on the Sea of Marmora bores were sunk many years ago in search of oil where there were surface seepages.

The Holy Land has many times been explored for oil as there are several extensive exposures of oil soaked rocks indicating the existence of oil forming conditions. The chief outcrop of oil rocks is at Nuba Musa. A stretch of oil-soaked limestone can be clearly seen by travellers using the main road between Jerusalem and Jericho. Bitumen is found in rocks on the shores of the Dead Sea and during the war at Makarum up the Yarmuk Valley a black bituminous rock was quarried by the Turks for fuel on the railway. The impregnated rock was here exposed on the crest of an anticline. The oil prospects of Palestine are probably connected with a carbonaceous phase of a group of deltaic sediments about the junction of the Nummulitic Limestone and the Arenaceous Nubian beds of Cretaceous age.

The Sinai Peninsular is politically part of Egypt so the various showings of oil between Suez and Tor scarcely come under purview in this article.

Many parts of Arabia have received the unwelcome visits of oil men, but disregarding the obstruction of the population which has always discouraged the intrusion of scientists, there appears nothing of really great importance to lament. The Farzan Islands off the Yemen in the Red Sea were tested a few years ago by a leading oil group, but operations were eventually suspended without any useful production being reached. Seepages of oil occur in apparent association with salt dome conditions which extend to the mainland. A province of salt domes seems to cover a wide expanse embracing Southwest Persia and possibly a part of Southeast Arabia bordering the Persian Gulf, Gulf of Oman and the Arabian Sea. Prospect drilling is projected in Bahrein Island which is domal in character. No very serious investigation has been made of the Hejaz although geologists have made hasty reconnaissances.

China

China is the one country which cannot be considered to have received the attention it deserves from oil prospectors. Native workings in several salt areas yield signs of oil and gas which would appear to warrant investigation.

Australasia

Australia has afforded little encouragement to oil prospectors so far. Repeated investigations have been undertaken to the accessible districts and quite a little drilling has been undertaken in regions of some promise, but except for the striking of wet gas at Roma in New South Wales, the results have been relatively unimportant. The desire to obtain indigenous supplies ensures the testing of any likely prospect. Fairly extensive surveys have been made in New Guinea where oil and gas seepages occur, but drilling did not give sufficient encouragement to persist in the efforts.

A small oil field exists in New Zealand at Taranaki on the North Island. Numerous tests in other localities have given gas and oil shows. Most of the East Indian Islands have been explored for oil and all those of promise are being developed today.

Europe

Probably no country in Europe has escaped the visitations of oil prospectors in consequence of reported manifestations of petroleum, but only three countries can be regarded as serious oil producers, namely, Russia, Roumania and Poland. France, Germany and Italy give some production and insignificant outputs have been obtained in England, Spain, Greece and Hungary. The geological conditions themselves condemn many countries of Europe which have been geologically examined for many years. The Permian basin of Northwest Germany is now being closely studied as it is thought that the salt domes of this region have never been adequately tested. If the anticipations of some leading geologists are realized some striking developments may be expected.

East Texas

Whether One Pool or a Series of Pools

It's a Big Oil Field

By JACK LOGAN
Staff Representative

TYLER, Texas.—Bret Harte and others who wrote in such interesting fashion of the gold rushes of former years would no doubt marvel at the activity which is today sweeping East Texas, scene of the greatest oil "rush" in the state for a decade. For interesting as they were, the concerted scrambles for gold or silver, limited by slower means of transportation and entailing perhaps more manual work and less trading, never assumed the proportions of the "booms" which have accompanied early development of some oil fields; and as early as the middle of February this year it had become apparent that the East Texas activity spreading out from new Rusk and Gregg County pools was developing into a real oil "boom" of the first order.

Not since Burkburnett hit its stride in 1919 or at any rate since Mexia consistently "made" the newspaper headlines in 1922, with tales of "flowing gold" and the calling out of state militia to quell lawlessness, has Texas witnessed the concerted oil field activity which is found now around Tyler, Henderson, Kilgore, Overton, Longview, and Joinerville. (The latter is a new town which sprang up overnight since the oil discovery.)

The activity is based on indications pointing to the development of a field of proportions which have no precedent in Texas. First the Joiner pool was discovered in west central Rusk County; then the Bateman-Kilgore area 10 miles to the north; and shortly afterward the Lathrop pool 13 miles still farther north in Gregg County. All are producing similar high gravity oil from apparently the same horizon.

Whether the three areas will be joined together is not yet known, but many operators have put up the cash to prove their convictions to that effect. In fact, they have not stopped with those limits. The lease play continues for miles through half a dozen counties to the north and through several counties to the south of the producing area. The width of the field (or fields) may be relatively great also. The Joiner area is already 2½ miles wide from east to west, with no dry holes, salt water or small producers to stop the steady march farther west, although the eastern edge of production is roughly established.

Regardless of how the field shall ultimately prove to be, continuous pool or series of pools along an ancient shore line skirting the Sabine Uplift, it will unquestionably develop into a large producing area within a short time, and it is already the busiest area in Texas, with field development progressing on a tremendous and expanding scale.

The field work is speeded along by division of promising acreage into many small leases, some as small as two or three acres, and these are owned to great extent by numerous small operators. Throughout the 23-mile stretch from the Joiner pool to the Lathrop pool there are only three lease blocks of any material size.

This control of large acreage by numerous small operators presents a striking contrast with conditions in most of the important flush fields brought in during recent years in Texas. Ordinarily the large companies have held high percentages of all promising acreage, and "booms" have been averted through orderly development and proration.

Efforts have been made to institute proration of some kind in the new East Texas area, but conditions of lease ownership ostensibly do not lend themselves to success in proration measures, and while anti-prorationists are stalling for time, with another faction advocating pressing need for proration, the field grows larger and larger. It appears, consequently, that the field will be too cumbersome to handle before any system of proration can be worked out. Already there are over 20 completed productive wells in the area, and in spite of restricted market outlet, actual production is around 20,000 barrels daily. Field activity has expanded from only a few wells several weeks ago to more than 125 operations.

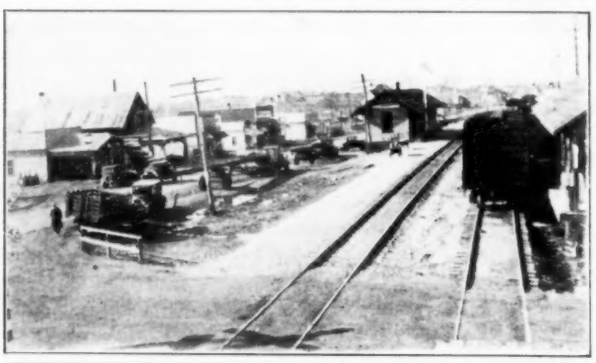
Whether or not you have witnessed a previous "boom," this one in East Texas will impress you as an unusual spectacle, teeming with life and action, and stimulating the imagination. In Henderson, Kilgore, Overton and Joinerville, all of which are accessible by good roads (and all but the latter by railroads), you find yourself in the heart of the field activity, the highways and byways made into ant trails by the many automobiles and the trucks moving in materials and equipment. At Tyler and Longview the crowd has more space into which to expand, and the congested conditions are not so noticeable. But even in those towns, removed somewhat from actual field excitement, one still feels the "boom" atmosphere, particularly in the hotel lobbies, cafes and office buildings.

Tyler, county seat of Smith County, and largest town in this section of East Texas, became established to considerable extent as a center for oil activities some time ago

East Texas, because of its peculiar conditions of geology, location, ownership and control, is the big threat in the oil business today. The boom there in a measure is unprecedented and prospects of large production from hundreds of wells over such an extensive area is having an effect on all activities associated with the industry. In recognition of these conditions, The OIL WEEKLY of March 6, 1931, will deal specifically with this section. Articles by staff writers and special contributors will deal with every phase of the development and prospects of development—a review of what has taken place there projected into the future—such information as every oil producer wants; whether or not he proposes to operate there, East Texas promises to influence his business.

Next week, especially, and every week, The OIL WEEKLY gives completely and concisely, the record of development in East Texas.

Ordinary traffic in Henderson—once a quiet East Texas town



The town of Arp, a flag stop that has become a busy railroad point

Along the Tyler-Joinerville-Henderson highway—such roads are a help

Night in Gregg Hotel lobby, Longview. (Courtesy Bradley Studio, Tyler)

when the Van field attracted attention to East Texas, and it is a base of operations for much of the work now in progress in Rusk, Gregg and adjoining counties. The town has a seven-story modern office building and several other smaller office buildings, and its accommodations include two large hotels, the Tyler and the Blackstone, the latter of which is being enlarged with a nine-story addition. Over 30 oil companies have offices in Tyler, with many of the geological and land departments for this section of the state concentrated here. These numerous companies at Tyler include Humble Oil & Refining Company, Shell Petroleum Corporation, The Texas Company, Prairie Oil & Gas Company, Gulf Production Company, Vacuum Oil Company, Southern Crude Oil Purchasing Company, Amerada Petroleum Corporation, Houston Oil Company, Foster & Jeffries, Continental Oil Company, Dixie Oil Company, Empire, Gas & Fuel Company, Herbert Oil Company Louisiana Oil Refining Corporation, Magnolia Petroleum Company, Monsey Oil Company, Simms Oil Company, Sun Oil Company, Barnsdall Oil Company, Smith Oil Company, E. G. Bateman Drilling Company, Fain McGaha Oil Corporation. In addition there are many other companies and operators that have just moved in. The hotels are literally overflowing, but they and the chamber of commerce graciously help visitors find lodging in rooming houses and residences. The Joiner and Kilgore-Bateman oil pools are about 20 miles east of Tyler, and may be reached over good roads in all weather.

Longview in Center

Longview, county seat of Gregg County, somewhat smaller than Tyler, but a progressive town and important railroad center, has been converted overnight into a strategic oil metropolis. It offers an important advantage of proximity to the oil fields. The new Lathrop pool, Gregg County, is only a few miles distanct to the northwest, Kilgore pool is about 15 miles to the southwest on a hard-surfaced highway, with the Joiner pool on 10 miles farther south and accessible by good roads. Longview is putting forth a strong bid for taking part in the oil activity, and is thoroughly permeated with the "boom" spirit. Various oil companies and operators now have Longview offices. The hotels here, as at Tyler, are overflowing, but the hordes of visitors are being well accommodated through co-operation of the hotels and chamber of commerce with rooming and boarding houses and private residences. Longview has one modern five-story hotel, and various other smaller hostelries, and W. H. Venable and associates of Shreveport, Louisiana, are arranging to construct an eight-story office building, for which plans have been completed. Two 60-room apartment houses will be built immediately, and approximately 70 dwellings and duplex houses are under construction.

Kilgore Real Boom Town

A little over 10 miles southward from Longview is Kilgore, formerly a little town of 500 population, but now a place with real traffic problems, and population estimates must be revised upward daily. For field workers, pipe liners, roughnecks, and truck drivers have assembled here in such numbers as they have never before been found in an East Texas town, and they are still arriving. Guy J. Stampff and C. McPhall have started a 125-acre townsite adjoining the Kilgore business district, and it is already a going enterprise, with numerous residences, grocery stores, rooming houses, hamburger stands, and welding and machine shops completed, while many others are under construction. The streets which have been laid off are named after oil fields, such as Mexia, Smackover, Seminole, Caddo.

Over a score of field operations are under way in the Kilgore pool, several miles south of the town, and the roads are crowded to the field, while freight cars laden with oil field equipment and materials are being unloaded from the tracks at Kilgore on the Missouri Pacific. Numerous supply companies have completed or are building stores at Kilgore, for this town is a strategic point for distribution, being centrally located with respect to all the producing areas which have been established. These companies include Continental Supply Company, Frick-Reid Supply Corporation, National Supply Company, Oil Well Supply Company, Houston Oil Field Material Company, T. T. Word Supply Company, Peden Company, Wilson Supply Company. Other concerns which have established themselves at Kilgore include National Machine & Tool Company, B. & A. Welding & Machine Company, as well as numerous welding and machine shops.

Driving south along the highway over the 15-mile section from Kilgore to Henderson, one passes the site of an oil skimming plant which is under construction for Beacon Refining Company 2½ miles north of Henderson, adjacent to a railroad.

The town of Henderson, county seat of Rusk County, formerly had about 3000 population, but probably three times that number of persons could be counted there any day now. The crowded streets give evidence of the importance which Henderson has assumed by virtue of its being the seat of much of the activity of the Joiner pool, where the present "boom" originated.

It is about eight miles northwesterly along a good hard-surfaced highway from Henderson to Joinerville and the Joiner pool. Joinerville is on the highway which leads from Henderson to Tyler, and it is at the edge of the Joiner pool. Like the pool, it was named in honor of C. M. "Dad" Joiner, whose third wildcat on the Daisy Bradford farm came in as the Rusk County discovery well, ushering in this "boom" which may flood the markets with oil. Like a mushroom, Joinerville sprang up suddenly along the highway after the oil discovery, and it is now the site of numerous oil field supply stores and machine shops. These include T. T. Word Supply Company, Decker Tool and Supply Company, Wilson Supply Company, Speed & Service Iron Works, Inc., Berry Bit and Sales & Service, The Brewster Company, Standard Supply Company, Bender Pipe Company, Lincoln Tank Company, Wichita Bit Shop, Riddle Boiler & Welding Works, Womack Boiler & Welding Works, John Glenn Pipe & Supply Company, El Dorado Foundry & Machine Company, Stanley Boiler & Machine Works, Texas Boiler & Sheet Iron Works. Joinerville has no post office yet, but has petitioned for one, and Henderson Route 1 is the usual mailing address. The small town of Arp, Smith County, 10 miles northwest of Joinerville on the hard-surfaced road to Tyler, is the usual shipping point for railroad shipments destined for Joinerville and the Joiner field. Arp is on the main line of the Missouri Pacific Railroad, while Henderson, also a shipping point for Joinerville in some instances, is on a branch line.

The Joiner field lies immediately to the north of Joinerville, and it is the busiest as well as the oldest of the three new East Texas producing pools. The land here is split up into many small leases, and a large percentage of drilling is concentrated here. The Joiner pool has over 20 completed wells and is yielding over 15,000 barrels of oil daily, and productive area is over two miles wide and nearly that long, with only the eastern boundary as yet determined.

Going northwesterly from Joinerville, one passes through Arp and on to Tyler over a good all-weather road.

Kilgore, recently a sleepy town with 500 people—It's awake now

New townsites are inevitable—this one adjoins the old town of Kilgore

Real estate operators are not overlooking any opportunities

Joinerville has applied for a postoffice and has evidence demanding it

C. E. BEECHER
Chief Production Engineer, Empire Gas & Fuel Company, Bartlesville, Oklahoma, New Chairman, Petroleum Division.

Engineers Inject Technical

At New York Meeting of

By H. J. STRUTH

NEW YORK, N. Y.—If continued interjection of economic questions is getting away from the subject of engineering, then it can be said that engineers attending the annual meeting of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers, held here February 16 to 19, got away from the subject at every session—technical or otherwise. In fact, economic questions seemed to be uppermost in the minds of most of the petroleum engineers present and questions of supply and demand, potentials and financial aspects of the oil industry practically dominated every session.

Unitization and proration problems were accorded considerable discussion, under the chairmanship of Earl Oliver, and their legal aspects came in for special treatment in a comprehensive paper presented by W. P. Z. German, general attorney for Skelly Oil Company, Tulsa. Mr. German stated that petroleum engineers will undoubtedly give credit to the state of California and its courts for having made the first substantial legislative and judicial direct recognition of the presence of gas energy in subsurface oil zones and its importance in the recovery of oil, and as the first to take affirmative steps to prevent the waste and to require the utilization of this energy. He also stated that the Oklahoma Corporation Commission and perhaps the Texas Railroad Commission have recognized this to some extent in proration orders. A pertinent statement in his paper was that if a state can require what the California statute does, there is every reason why it could not require the conservation and use of this energy by a type of development and operation such as brought before the membership of the Petroleum Division of the A. I. M. E.

E. H. GRISWOLD
Assistant Chief Engineer, Continental Oil Company, Ponca City, Oklahoma, New Vice-Chairman Production Engineering.

Mr. German concluded his paper by stating that the police power, if exercised, can close the door to the desire of a neighbor to gain possession of oil and gas deposits. "Police power, if exercised," said Mr. German, "can dispense with the prevailing wasteful cost of capturing these substances and also dispense with the practice of skimming the cream off of flush fields and leaving the bulk of the deposits to be possessed only at such high cost that much of it which could have been will never be removed at all."

H. C. GEORGE
University of Oklahoma, Norman, Oklahoma, Secretary-Treasurer.

Mr. German's view of compulsory unit operation carried the added thought that under proper police powers such procedure could, if it would, adjust output to market demand and thus let the tankage of excess supplies rest where they should, in nature's costless, wasteless and perfect warehouse.

California and Unit Operation

Admirably fitting in with Mr. German's views and group discussion of them was an equally interesting paper by Joseph Jensen, chief petroleum engineer of Associated Oil Company, Los Angeles. Mr. Jensen's report cited the constructive steps taken in California through the Kettleman Hills agreement which goes into effect on April 1, of this year. He stated that California's outstanding contribution to unit operation is the plan of development now established for the North Dome of Kettlemen Hills. Through an organization known as the Kettleman North Dome Association control of unified operation and development of 10,800 acres of proven and semi-proven oil land will be exercised. At the same time, Standard Oil Company of California will operate as another unit its fee land of 9460 acres of similar character. He pointed out that through this new plan, almost immeasurably valuable oil land is being surrendered to the control of the association by 15 oil companies.

Unit Repressuring

Unit repressuring in the Cook Pool of Shackleford County, Texas, presented by Graham P. Crutchfield of Albany,

Economics Into Discussions

Petroleum Section A. I. M. E.

Staff Economist

L. L. BRUNDRED
Consulting Petroleum Engineer, Los Angeles, California, New Associate Chairman.

Texas, proved of unusual interest at the first engineering session. The facts presented by Mr. Graham furnished valuable data in tabular and chart form that aroused considerable interest and discussion. Mr. Graham cited the value of repressuring by stating that it has been proven possible to increase ultimate oil recovery by such practice to the extent of 100 per cent. In the Cook Pool, for which he had actual records, he pointed out that the predicted ultimate recovery before repressuring would have been 2,750,000 barrels, whereas the adoption of repressuring methods in that pool have definitely raised the projected ultimate recovery to 5,500,000 barrels, a gain of 100 per cent. Further amplification of the value of repressuring was brought out in a paper by Eugene A. Stephenson, Professor of Petroleum Engineering of the University of Missouri, wherein he summarized in part the fact that proration on a basis of energy will make every operator alive to the importance of gas conservation. Further, that with a knowledge of available gas reserve a definite program of oil production can be outlined, a program which can be readily modified to meet market demands by merely changing the daily allowance of gas per acre per day; that operating costs per barrel can be kept low since the flowing life of wells will be lengthened.

JOHN R. SUMAN
Humble Oil & Refining Company, Houston, Texas, New Member Executive Committee.

Measurement of slippage in flow through vertical pipes, a paper presented by T. V. Moore and H. D. Wilde, Jr., Humble Oil & Refining Company, Houston, brought out a number of interesting conclusions that elicited discussion by various production engineers. This paper concluded that for a given rate of flow of liquid and gas, slip losses are less in smaller pipes; friction losses, are greater. It was pointed out that the most efficient flow string is one that so balances the slip losses and friction losses that a given quantity of oil and gas can be carried with a minimum pressure drop. It was stated that slippage is not affected by the viscosity of the liquid flowing, but is dependent markedly upon the density and to a lesser extent on the surface tension of the liquid.

Big Lake Deep Wells

Data relating to the age of the producing horizon, character of rocks, geologic section and methods and equipment used for drilling and completing the deep wells in the Big Lake, Texas, field were referred to in a paper on Reagan County production curves by Kenneth S. Ritchie, Best, Texas. Mr. Ritchie cited the outstanding factors pertaining to the discovery well of the world's deepest oil producing structure, University 1-B of Group Number One Oil Corporation in the Big Lake field. He stated that it is the world's pioneer well to produce oil in commercial quantities from a structure 8500 feet below the earth's surface; is the only producer from the 8500-foot pay for a period of 17 months and 24 days, during which time the flow of oil increased steadily from an initial of 40 barrels daily to a maximum of 2926 barrels daily, and then, after a period of decline staged a real record for one day's production at 2950 barrels. More remarkable is the fact that sub-surface disturbances set up by the drilling of additional wells in that pool affected production of the discovery well during only a short period after which the well staged a comeback to a higher rate of production than recorded at its former peak. A chart showed the effect of further drilling in this field and indicated that a decline in gas production in the discovery well has effected a recent change in the gas-oil ratio.

JOSEPH JENSEN
Associated Oil Company, Los Angeles, California, New Associate Vice-Chairman, Production Engineering.

Flooding Operations

That flooding operations in various oil fields of the United States have met with practically little success, was emphasized by L. S. Panyity, geologist of Bradford, Pennsylvania. Mr. Panyity presented interesting core analysis for the Bradford field, wherein

EARL OLIVER
Ponca City, Oklahoma,
New Associate Vice-Chairman,
Production Engineering.

it was shown that many of the difficulties encountered in flooding operations in that and other fields is due to conditions wherein the size of sand grains becomes the all-important factor in determining the permeiability of an oil bearing formation. Mr. Panyity cited numerous instances why flooding has not proved satisfactory, among them being the presence of open streaks in sands that allow water to flow through them with great rapidity and in large volume. He stated that many believe these streaks to be "gas streaks" through which large volumes of gas had passed without the presence of oil in the sand body. His interpretation of the presence of such streaks is that they are due entirely to large grain sizes and the reason they take lots of water and yield very little oil is because the water passes through too rapidly. He said experiments in the Bradford area had indicated the necessity for so-called delayed flooding.

Economics

A world-wide review and forecast of oil production, bringing forth numerous interesting papers by recognized production engineers and geologists, contributed largely to interested discussion of the economic situation throughout the world. Not only did the papers on domestic and foreign oil production elicit discussion of the economic aspects of the industry but also brought forth a great deal of thoughtful comment on legal phases of the development of concessions in foreign lands. The Russian oil situation was ably covered by Basil B. Zavoico, consulting geologist of Tulsa, wherein he characterized the oil industry in the Soviet Union as having closed the 1929-30 operating year fulfilling its assigned program. He stated, however, that during the same period no basic improvements had been noted and that careful study of conditions in Russia indicates that disorganization has continually increased. Mr. Zavoico said he believed that supply and transportation in Russia are approaching a state of breakdown; labor problems there are becoming increasingly difficult and estimates for the 1931-33 period of the five-year plan are excessive.

H. J. STRUTH
The Oil Weekly
Houston, Texas,
New Vice-Chairman for
Economics.

A pipe line that will connect the Sanandita, Bolivia, field with the Lomitas field in the Argentine was stated by Gilbert P. Moore of New York to be in prospect for 1931. He stated that this will place Bolivia among the ranks of the producing countries of South America for the first time.

W. B. Heroy, New York, in presenting a paper on oil developments of Africa, stated that the rapid development of transportation routes on the African continent in recent years has greatly stimulated the demand for motor fuels and this has led to more extensive exploration of such limited portions of the continent as seem to give promise of commercial oil production.

Another paper by Gilbert P. Moore, setting forth oil developments of the Argentine brought out that it is likely that if the Argentine government restrictions were removed and private capital permitted to enter the oil producing industry, a petroleum law governing operations in the Argentine would be enacted. He said that a large number of decrees have been issued governing the manner of drilling, cementing and bringing in wells but they are not properly co-ordinated into a workable code.

E. W. CAMP
Empire Refineries, Inc., Tulsa, Oklahoma,
New Vice-Chairman for Refinery Engineering.

Venezuela's crude oil production during 1931 will be substantially less than in 1930, according to C. W. Hamilton of New York, who presented a very thorough report of the industry in that country. He predicted a decline in exports of Venezuelan crude of as much as 10 per cent under 1930 and stated that the use of electrical power for pumping would be started this year along the coast of Lake Maracaibo.

In Rumania, competitive drilling has been at its worst, according to Ionel I. Gardescu of Pittsburgh, who covered the Rumanian oil situation. He said that any company or individual has the right to do prospecting on any state land, either by geological or geophysical methods, upon payment of an annual fee of $60. Exploration work involving wildcat drilling is given by exclusive permit for a definite area to the first company applying for such permit, according to Mr. Gardescu.

Production in the Dutch East Indies will probably be maintained within market requirements in the future, since developments there are controlled by one company, ac-

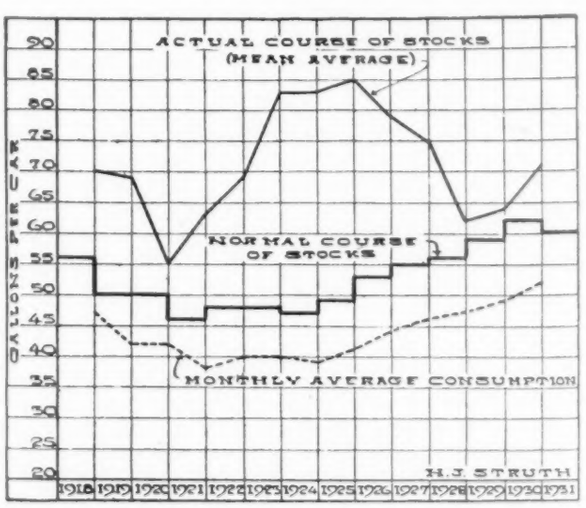


FIGURE 1—*Theoretical normal course of gasoline stocks compared with actual course (mean actual average) and trend of consumption, expressed in terms of gallons per motor vehicle*

cording to Fred B. Ely, who presented a paper of oil developments there. He pointed out that unskilled labor in the Dutch East Indies is cheap but inefficient, there being five to six Malay helpers for a drilling rig.

Reserves of oil on present drilled and closed in acreage in Trinidad amount to about 80,000,000 barrels, while other areas not yet drilled may yield 177,000,000 barrels of oil, according to William J. Millard of Pittsburgh. Mr. Millard stated that there are about 78,000 acres of unleased land in Trinidad which may yield Cretaceous oil, of which the possible reserve is estimated at 810,000,000 barrels. He placed the total reserves of oil there at about 1,067,000,000 barrels, stating it to be a large amount of oil for an area about the size of an Oklahoma county.

HARRY H. HILL
Standard Oil Development Company, New York, New Vice-Chairman for Engineering Research.

Mexico's crude production will probably not exceed 35,000,000 barrels in 1931, according to Valentine R. Garfias of Henry L. Doherty and Company, New York. He stated that the region in northeastern Mexico, where wildcat operations are being carried on at this time by several companies merits special attention as offering a possible important source of future production.

Gas Development

The domestic oil situation was reviewed and projected also and a number of speakers laid particular stress upon developments in the natural gas business. Kentucky, Ohio, Tennessee, Kansas, Oklahoma and Texas were cited as having in sight the intensive development of natural gas producing areas. Henry A. Ley, consulting geologist of Tulsa, pointed out in his paper on oil and gas developments in Oklahoma that there are statistical data to indicate that the Oklahoma City field has reached the zenith of estimated potential output and has made substantial declines from that position which no amount of new completions will ever retrieve. He stated, however, that conservative evaluations warrant the prediction that Oklahoma should produce an average of 500,000 barrels of oil a day through the next decade and 200,000 barrels a day through the succeeding decade of 1940-50—a total of at least 2,555,000,000,000 barrels of oil in 20 years.

EARL A. TRAGER
Consulting Engineer, Tulsa, Oklahoma, New Vice-Chairman for Production.

While economics predominated throughout all of the technical sessions of the Petroleum Division of the A. I. M. E., there was a special session on this important subject that brought together a large gathering of engineers and economists. Under the chairmanship of Joseph E. Pogue, consulting economist of New York, papers were presented on stabilization, economics of gasoline marketing, relation of gasoline to petroleum economics and interest rates as a guide to oil industry operation. This final session proved to be of such interest as to necessitate continuation of discussions far into the evening session, which followed the annual dinner and recognition of new officers for 1931-32. Dr. Leonard Logan, associate professor of economics of the University of Oklahoma aroused considerable discussion in the presentation of his paper on stabilization. He advocated a dictatorship for the industry, along the lines of organized baseball and motion pictures. He advocated the unit plan of operation as soundest from a standpoint of engineering as well as economics. He went on record as being emphatically opposed to a tariff or embargo on foreign oil, but stated that if it would aid the morale of a majority of operators in the country it might prove helpful to establish a temporary embargo.

An interesting theory was developed by Barnabas Bryan of New York, who stated that if it is true that the oil industry was saved from deflation for eight years because money was cheap and suffered deflation during 1929 and 1930 because there had been a run-up in money rates, then the condition of the money market and the credit structure is of more importance to the average oil man than is the question of whether gasoline stocks are 30 or 60 million barrels on April 1, 1931.

A paper presented by H. J. Struth, Staff Economist, The Oil Weekly, on economics of gasoline, showed this product as representing the chief source of revenue to the industry, concluding that any constructive program of oil production control must begin with a definite knowledge of anticipated gasoline demand. It was also shown through a series of charts, that gasoline supply and demand represents a veritable groundwork of the oil industry's economic structure. One of these charts, shown here as Figure 1, portrayed the actual and normal course of gasoline stocks for a period of years, showing that there has been a wide margin between actual and normal stocks of this product. The paper re-

(Continued on page 56)

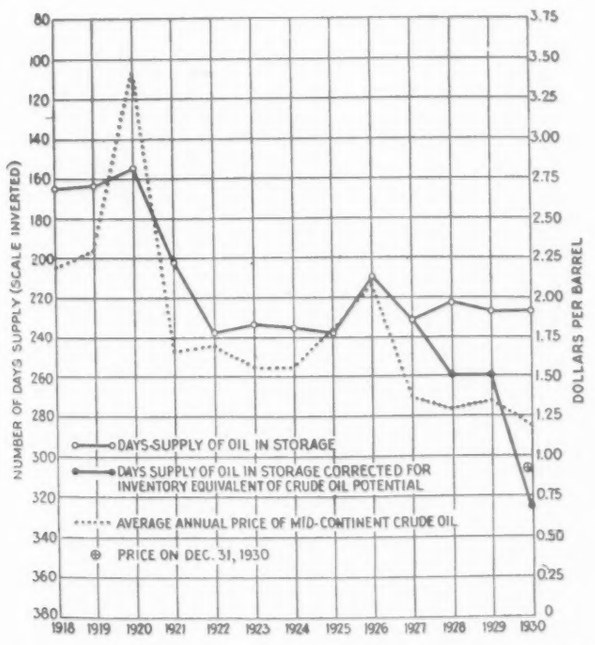


FIGURE 2—*Correlation of oil inventories and crude oil price by years, 1918-1930. Shows effect of crude oil potential upon price of crude oil and indicates possible lower prices ahead*

Converting Percussion Tools Into Rotary

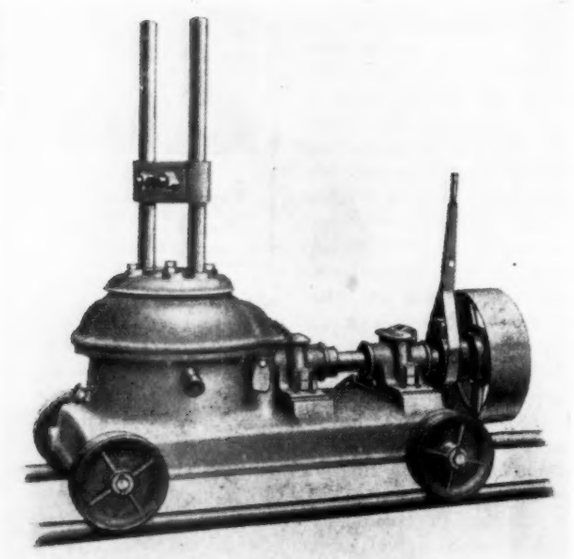


FIGURE *I*
Clamp (Rotationsschelle) Abbildung 2

GERMAN engineers have introduced into Roumania a device for converting a percussion drilling rig into a rotary or combination rig which seems to have merit. It is comparatively inexpensive, and it is easily adaptable to the cable tools and spudding machines in use in the United States. For example, there was about 90 feet of soft formation which caused a very great deal of misery to the "spudders" who developed the Bellevue field in Bossier Parish, Louisiana. Had they had *Bohrwagens* to mud off this "quick sand," they probably could have finished their wells in half the time.

The Bohrwagen is nothing more than a supplementary rotary table mounted on a small car which operates on rails laid either across the derrick floor or built up in the derrick above the walking beam. It is used in European practice particularly for coring or for drilling through soft formations in connection with Austro-Galician, Alianta, Fauck, and Raky tools, as well as ordinary spudding machines.

When preparing to take a core with a rotary core-barrel or upon encountering a soft formation for which the rotary is more adapted than the percussion method, the Bohrwagen is run over the hole; bit, or core-barrel, and drill pipe are inserted; a small Rotationspulkopf or rotary swivel is connected up to a miniature belt-driven slush pump which is part of the outfit; a belt is installed from the band-wheel to the drive pulley of the "bore-wagon"; and in three shakes the percussion rig has been converted into a rotary machine which is claimed to have a drilling capacity of 3000 to 4000 feet.

FIGURE *II*
Swivel (Rotationsspulkopf) Abbildung 7

As stated above, the Bohrwagen takes its power from the band-wheel; and imparts it to the drill pipe by means of two upright posts about four feet in height. A clamp, shown in Figure 1, is affixed rigidly to the drill pipe by means of two lock bolts shown in the picture. The two outside holes are larger than the diameter of the rotating posts, which permits the clamp to slip down as drilling progresses. Obviously, the clamp must be reset every four feet, or thereabouts. Rotary drillers have been known to use this same clamp device when drilling under pressure with flush-joint drill pipe.

The rotary swivel used with this outfit is shown in Figure 2. At the conclusion of the coring or rotary drilling operation, as when encountering hard rocks, the Bohrwagen is rolled aside and percussion drilling is resumed.

German methods seldom win the approval of American oil operators; but here is one idea which might be adapted to American conditions, particularly in those fields where drilling is done by spudding machines and where both hard and soft caving formations are encountered.

Horizontal Water Well For Field Water Supply

One no longer marvels at the versatility of the American oil man operating in foreign parts. Ingenuity is common-place among men who make good in foreign fields. New problems and unusual obstacles are met and overcome from day to day, as routine features of foreign service.

The unusual becomes common-place when one sees so many different fields and so many different methods of operation; but it must be admitted that some surprise is occassioned when one comes across a horizontal water well in the Ceptura field, of Roumania.

Water of good quality suitable for use in boilers and internal combustion engines is hard to obtain in Roumanian fields. There are, however, a number of shallow or irregularly dry river courses which carry sub-terranean flows beneath surfaces of gravel and sand.

When the Romana-Americana camp at Ceptura ran short of water, some one conceived the idea of tapping this subterranean supply in the bed of a shallow stream which runs near the camp. A ditch was dug straight across the river-bed, its bottom resting on a clay hard-pan and intercepting the underground flow. A number of joints of 18-inch slotted pipe were laid and made up in this ditch; and the pipe was then filled over with coarse gravel.

The gravel retards sand and sediment but allows the naturally filtered under-ground water to flow in through the slots in the pipe.

A pump suction draws water out of the short end of this 18-inch liner, and that is all there is to it.

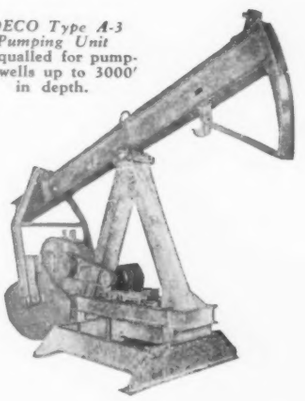
The scheme, after all, is only a Layne & Bowler well laid sidewise; but a smart idea, nevertheless.

During the rainy season, the water supply, being buried in the bed of the river, is safe from all flood damage.

IDECO Chain Rig
For Cable Tool Drilling and Deep Well Pumping Service. Furnished with proper speed reduction unit for steam, gas or electric drive.

The IDECO Pumping Line Is Complete

IDECO Type A-3 Pumping Unit
Unequalled for pumping wells up to 3000' in depth.



IDECO Geared Unit
For the heaviest oil field requirements — reworking, pumping, pulling rods and tubing, bailing and swabbing.

Units are shown with Ideco All-Steel Welded Walking Beam, Ideco Pitman and Ideco Crank Counterbalance.

IDECO has developed its line of pumping equipment to one of completeness and efficience. IDECO can give you any type of pumping unit suitable for your particular requirements, from the Geared Unit for the heaviest oil field requirements to the Chain Rig and type A-3 outfit for shallower wells.

IDECO has helped pioneer—has built a world wide service—maintains a staff of engineers and metallurgists who are constantly incorporating improvements of design and metal in our products—building oil field equipment which we honestly believe cannot be equalled.

True economy lies in permanency and that spells IDECO.

See our display at The Oil Equipment & Engineering Exposition, Los Angeles, March 16-22

The International Derrick & Equipment Co.,
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Methods and Effects of Unit Repressuring in the Cook Pool

Paper read before American Institute of Mining and Metallurgical Engineers, New York Meeting, 1931.

By GRAHAM P. CRUTCHFIELD
Chief Engineer, Roeser & Pendleton, Inc., Albany, Texas

THE W. I. Cook pool in Shackelford County, Texas, has been the subject of a number of papers and articles. Its unique position both as to operation and development has made it an ideal location for unit repressuring. The major portion of the pool is located on the W. I. Cook ranch and most of the oil leases are owned by Roeser & Pendleton, Inc. and Continental Oil Company and operated by Roeser & Pendleton, Inc. Humble Oil & Refining Company and Tom James operate producing leases which have a vital bearing on the unity of the pool. Both have cooperated in the repressuring project. Practically the entire royalty is owned by Mrs. W. I. Cook and she has given the operators her entire cooperation in all phases of unit repressuring.

The majority of wells are producing from the Cook sand, which is one of the Cisco series, a subdivision of the Pennsylvanian. The average depth of the producing sand is

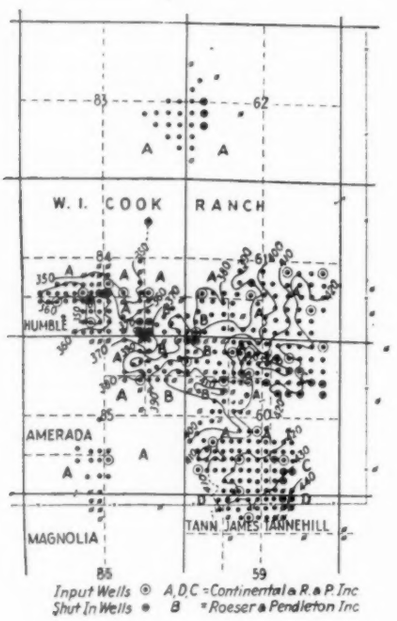
W. I. COOK RANCH
HUMBLE
AMERADA
MAGNOLIA
TANN JAMES TANNEHILL
Input Wells ◎ A,D,C = Continental & R & P Inc
Shut In Wells ● B = Roeser & Pendleton Inc

FIGURE 1

Producing sand contours, Cook pool, January 1, 1931

1300 feet and its average thickness is 18 feet. A porosity of from 30 to 35 per cent has been indicated by a few unsatisfactory cores. There is a wide variation (from five to 30 feet) in the thickness of the producing sand body and in some localities it is badly broken.

Figure 1 shows the present development of the field and also subsurface contours of the Cook sand.

Installation

A vigorous drilling campaign was instituted immediately after the completion of the discovery well on February 19, 1926, resulting in the completion of 142 wells by the first of May, 1927. The production from these wells was 8700 barrels of oil and 7,000,000 cubic feet of gas per day. Experiments conducted during this time with the aid of portable compressors having shown the feasibility of repressuring the field, it was decided to proceed with the project at once.

To simplify cost accounting and unify operation, this work was placed in the hands of the gasoline department, with the agreement that the producing divisions pay three cents for each 1000 cubic feet of gas returned to the sand. Three 190 horsepower direct driven gas-engine compressors were installed in the gasoline plant. These machines take residue gas and fractionator vapors from the gasoline plant at 30 pounds pressure. They are capable of delivering 4,000,000 cubic feet per 24 hours at 400 pounds pressure. Main and distributing lines were laid from this central station to all parts of the field where injection gas was needed. Each individual injection well was equipped with an automatic volume controller, high-pressure stuffing box casinghead, and open-ended string of tubing.

To meet the need for accurate records of any field being produced under repressuring conditions, a system was installed which has proved very satisfactory. The lease is gaged by batteries, the average condition being one battery to 15 producing wells, and at each battery a test tank and test trap were manifolded to the wells producing into that battery. Each day one well is switched so that its oil production and gas volume may be measured with this testing equipment. This results in a 24 hour test of both oil and gas from every well on the property at least twice each month.

Operation

Beginning July 15, 1927, gas has been continuously returned to the producing formation and to date has reached a total volume of 3,750,000,000 cubic feet. A brief summary of the actual operating problems encountered, and the remedies applied, with the hope of solving them, may be of interest. The first inpection wells were located on the highest part of the structure. These proved very unsatisfactory . The producing formation has a dip of only 50 feet to the mile and consequently no sharp line of demarcation between the oil areas and gas areas. Gas injected at the top of the structure immediately channelled as far as five locations down structure. This led to the abandonment of the original injection wells and the location of new ones distributed as regularly over the entire producing area

A MYSTERY AND A MEDICINE

GREW UP

TOGETHER

TO BUILD

A

NEW CIVILIZATION

ELECTRICITY was a vague mystery and oil a quack medicine in 1851. In that year Benjamin Franklin experimented with his epochal kite to prove his theory that lightning and electricity were identical. To avoid the ribald jeers of his neighbors at seeing a middle-aged man flying a kite in a rainstorm, Franklin made his small son accompany him and appear to take part in the sport. When the kite went into a black cloud Franklin got an electric shock when he approached the key near the end of the string with his knuckle. Later when the string became a good conductor by becoming thoroughly wet, electricity ran out of the key in a stream.

When Franklin was getting that first faint knowledge of a force that was later to light the world and turn the wheels of its industry, Indians of America were collecting oil on the surface of pools by dipping their blankets and wringing the oil into bowls. Since the action of the oil as medicine upon the body was more or less mysterious to the Indians, the places where oil was found were held in esteem approaching that for sacred ground.

It is a remarkable coincidence that oil and electricity, two forces that have done so much to identify this era in history as the "industrial era", should have been developed simultaneously. They started together, and more and more they are working together.

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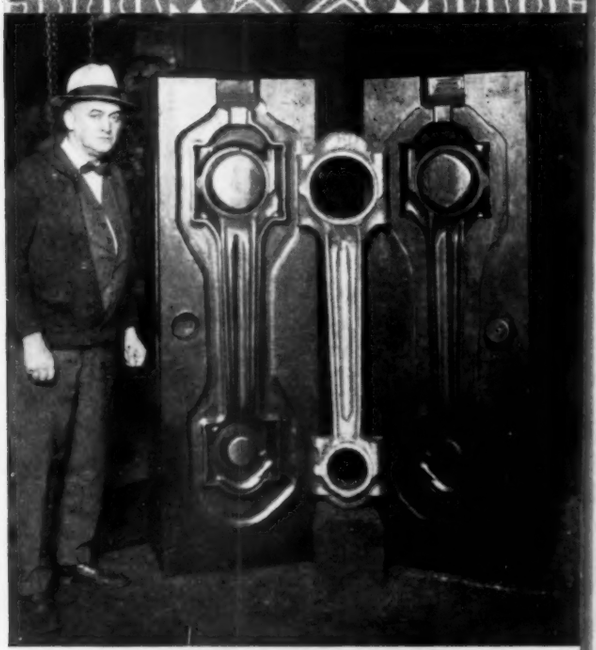

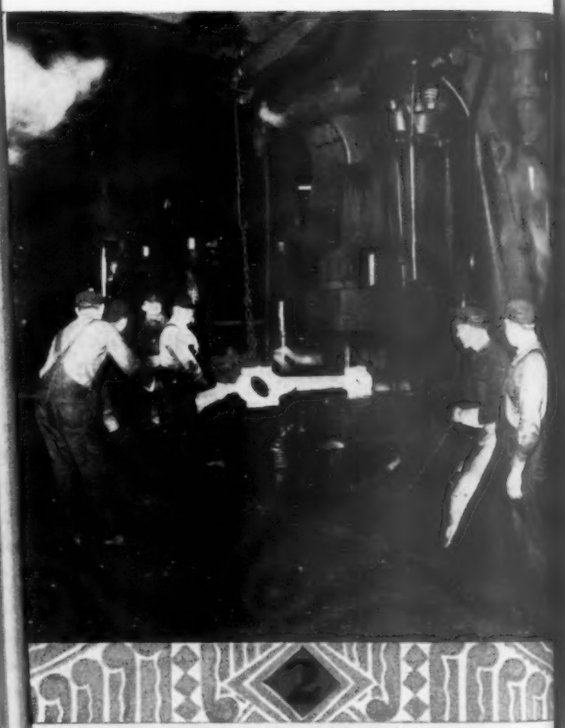

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THE COOPER-BESSEMER CORPORATION

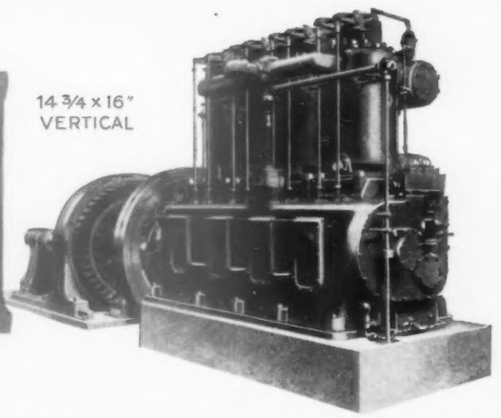
MOUNT VERNON, OHIO — — — GROVE CITY, PA.

1 Die that forges connecting rods for 14-¾ x 16" Vertical engine.

2 Workmen removing die-forged rod from steam hammer. Note one-half die on top, one-half on bottom.

3 Workmen trimming off excess metal on hydraulic trimming press, after rod has been die-forged.

4 Inspectors using Brinell hardness testing machine to determine hardness and to check heat treatment.



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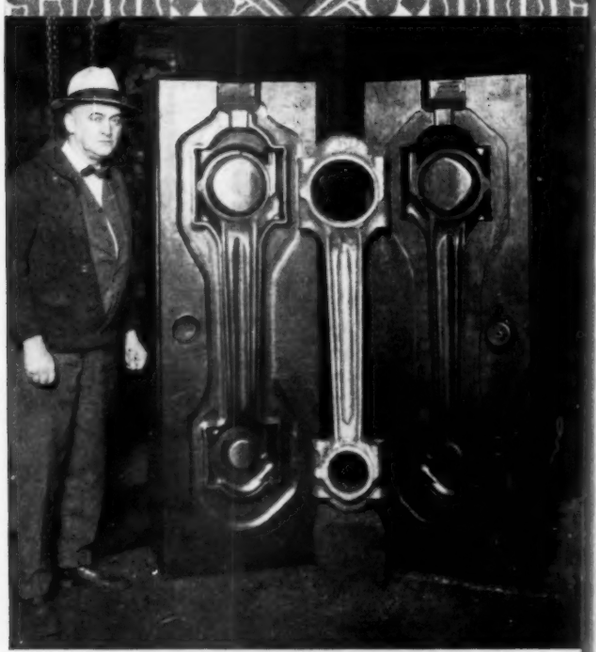

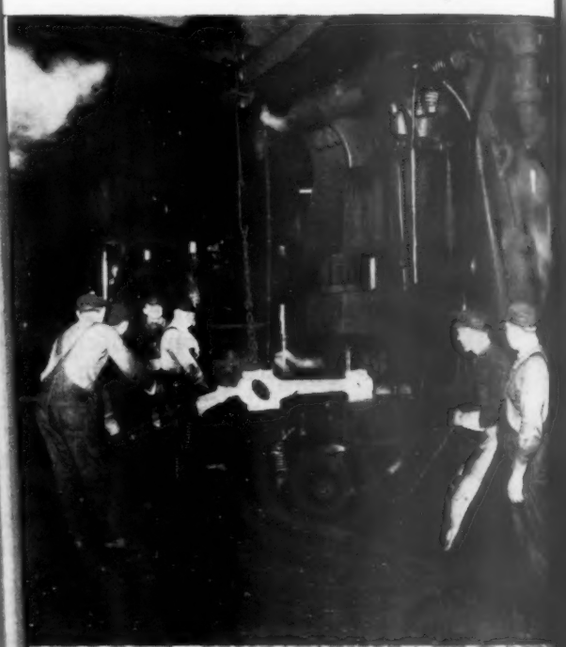

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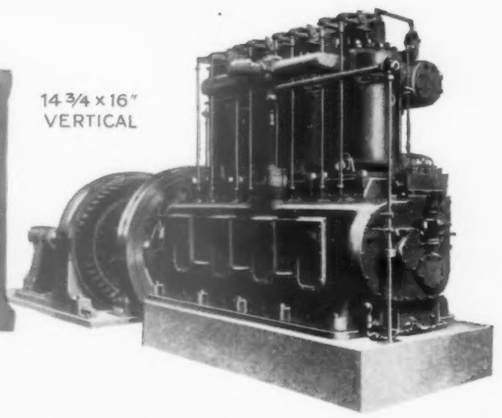

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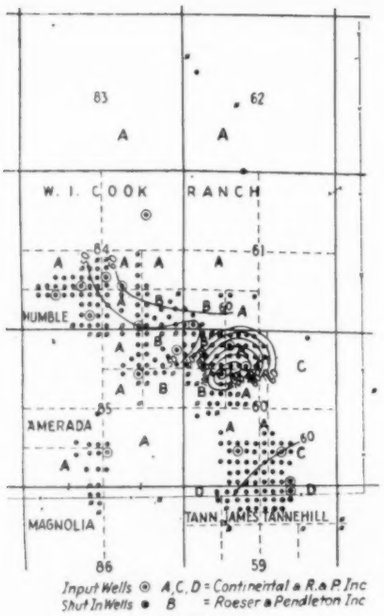


FIGURE 2
Rock pressures, Cook pool, June 1, 1928

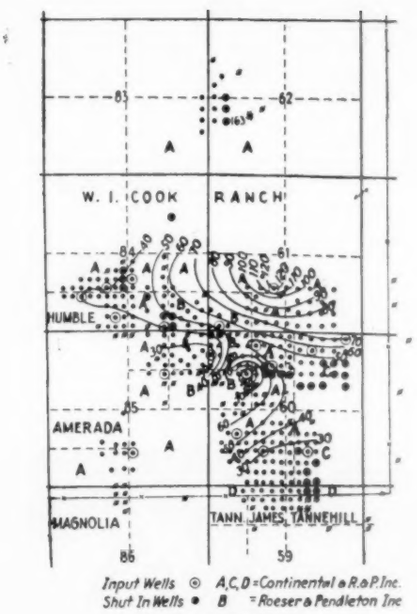


FIGURE 3
Rock pressures, Cook pool, January 1, 1929

as the sand conditions would permit. It was found advisable to use for injection purposes old oil wells whose original low rate of production indicated a tight sand condition. This was done so that the oil movement might be toward more permeable portions of the sand. Immediately it was discovered that there was a wide difference in the pressure required by various wells for the injection of gas. Some would take a satisfactory volume at a pressure only slightly exceeding the rock pressure, while others would not take any gas at the highest pressure that could be maintained with the equipment available. Between these two extremes, wells of every degree of resistance were encountered. Steam and hot water injected and agitated by means of the tubing left in the wells for that purpose frequently would make it possible to use wells that otherwise would have been abandoned as injection wells.

The first winter water vapor in the gas caused trouble by freezing at various points throughout the system. Line breaks in cold weather frequently caused a freeze-up of the complete distributing system, due to the evaporation and expansion of the liquid propane and butane present. This was particularly difficult to handle in buried lines because it was impossible to get at them to thaw them out. Repeated occurrences of this particular trouble leaves some doubt as to the actual value of buried lines for this service. The installation of a gas after-cooler and scrubber at the compressor station prevented such frequent occurrence of these troubles. Freezing of the automatic volume con-

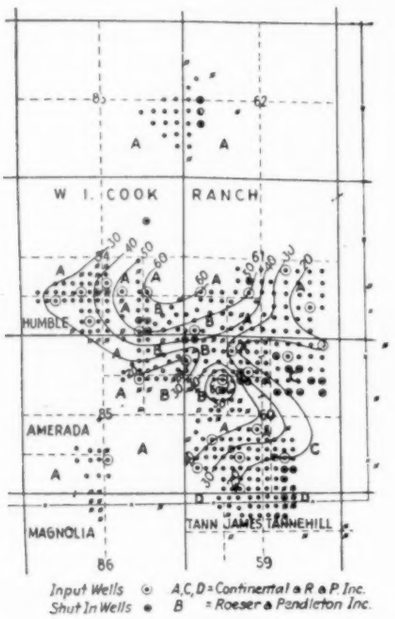


FIGURE 4
Rock pressures, Cook pool, January 1, 1930

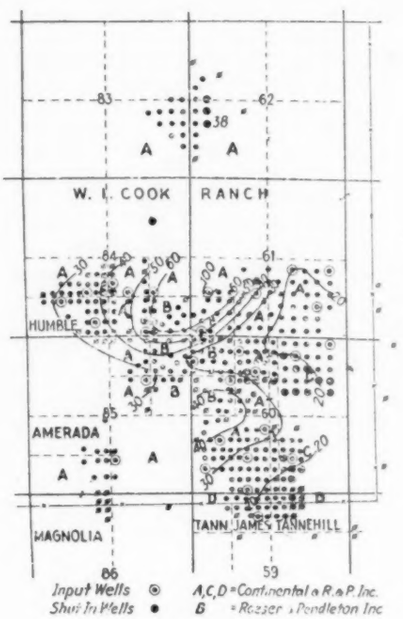
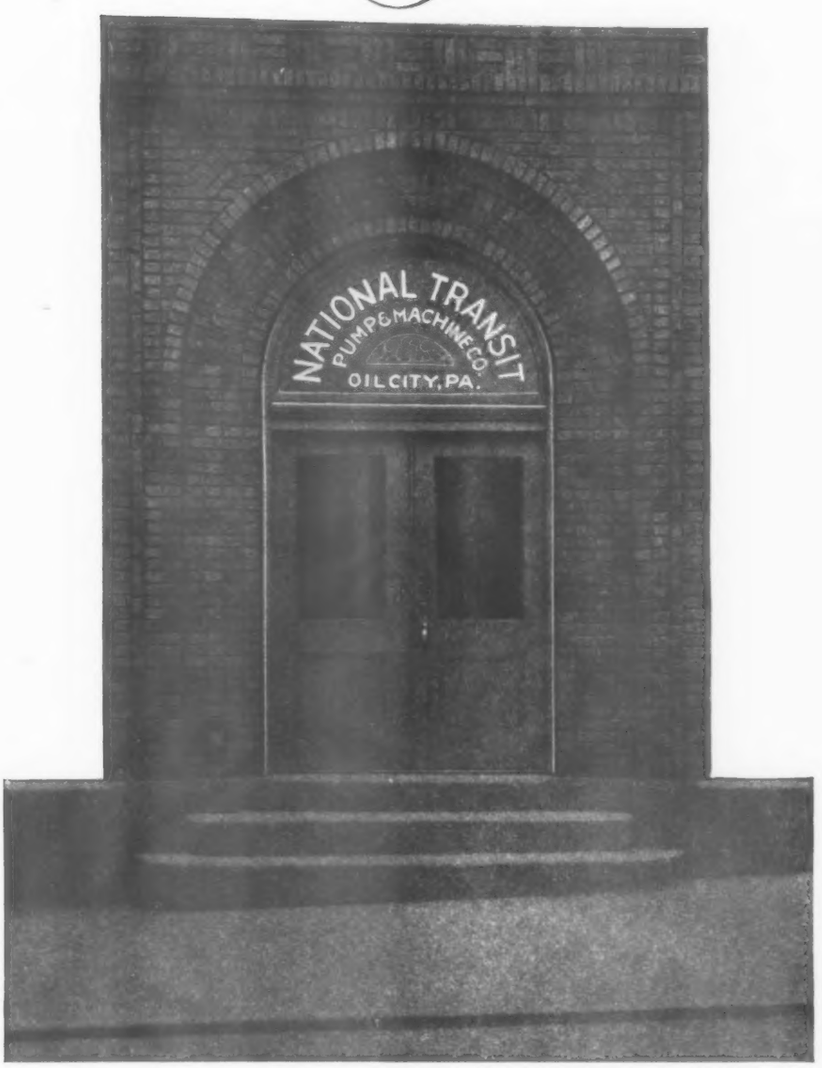


FIGURE 5
Rock pressures, Cook pool, January 1, 1931

There is no crape on this door



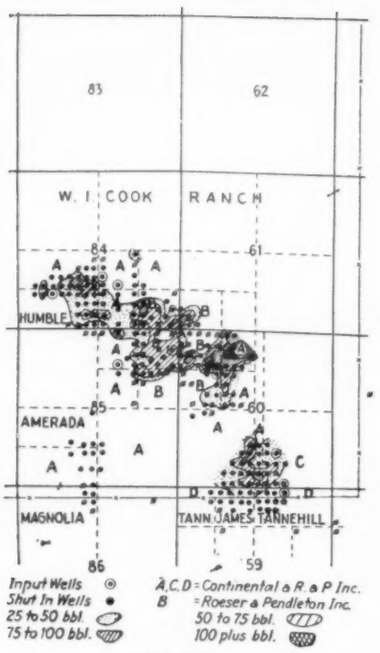


FIGURE 6
Daily oil production, Cook pool, January 1, 1928

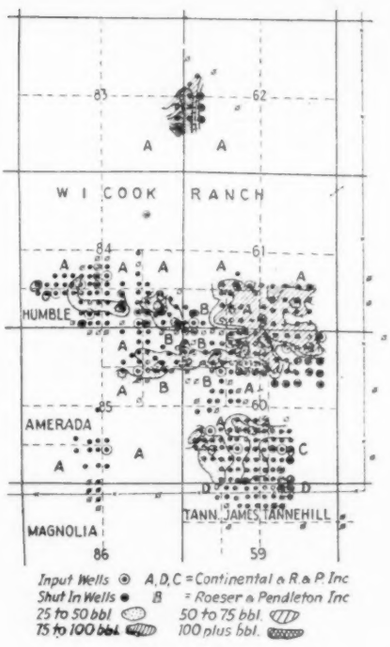


FIGURE 7
Daily oil production, Cook pool, January 1, 1929

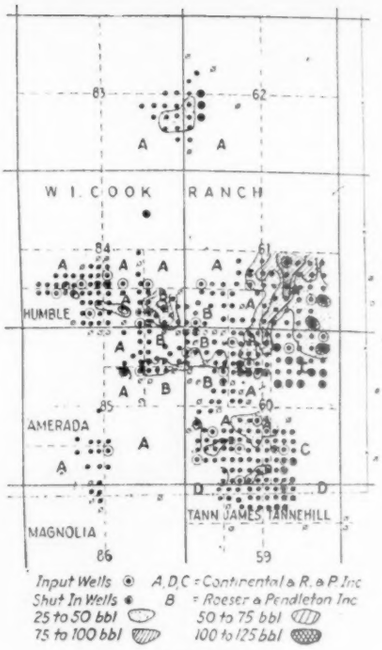


FIGURE 8
Daily oil production, Cook pool, January 1, 1930

trollers was remedied by installing a heater ahead of the control valve at each well. This heater consists of a hot-water-to-gas heat exchanger in which temperature is maintained by the thermosiphon circulation of water heated in a small boiler placed at a safe distance from the control apparatus. The exchanger itself is uninsulated and installed with the rest of the apparatus in a double-walled meter house, which was built to prevent freezing of the controller block valve and actuating gas-pressure regulator. There was trouble with injection wells that would run for long periods of time with a normal injection pressure and then gradually build up resistance until it was no longer possible to inject gas at the highest pressure that the equipment was capable of maintaining. A vigorous washing of the producing sand with boiling water and steam would invariably restore such wells to their previous low resistance. The well would operate normally for several months, when the same condition would again arise. An investigation disclosed that fine rust from the distributing lines was being deposited in the bottom of the in-

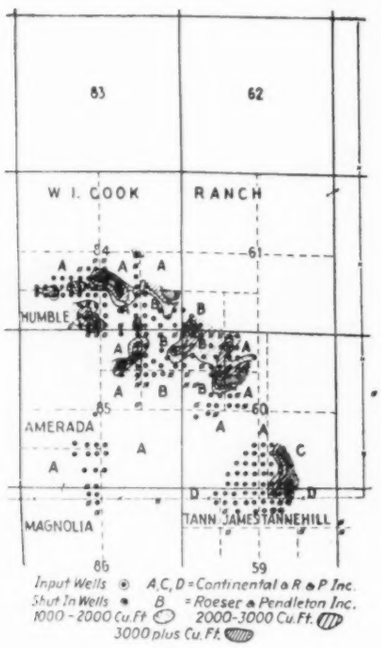


FIGURE 9
Gas-oil ratios, Cook pool, January 1, 1928

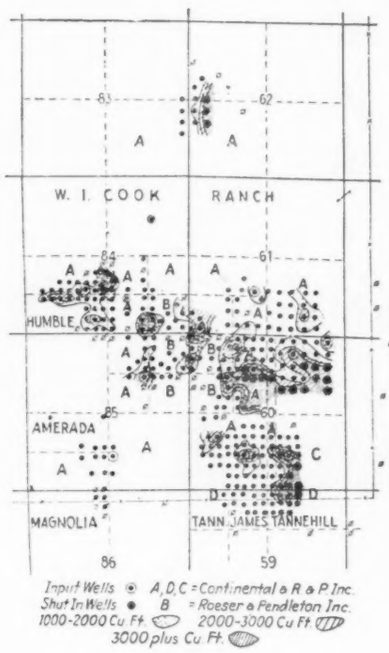


FIGURE 10
Gas-oil ratios, Cook pool, January 1, 1929

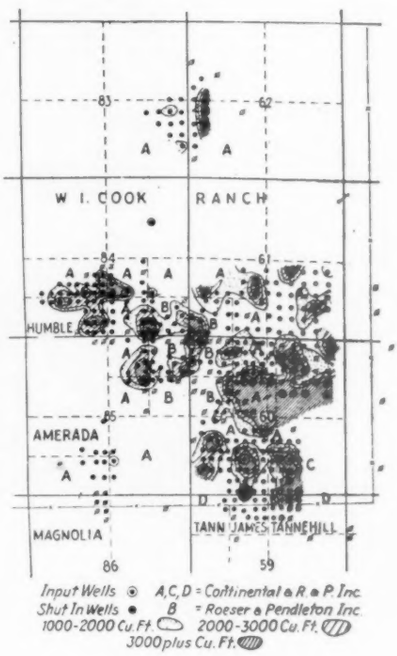


FIGURE 11
Gas-oil ratios, Cook pool, January v, 1930

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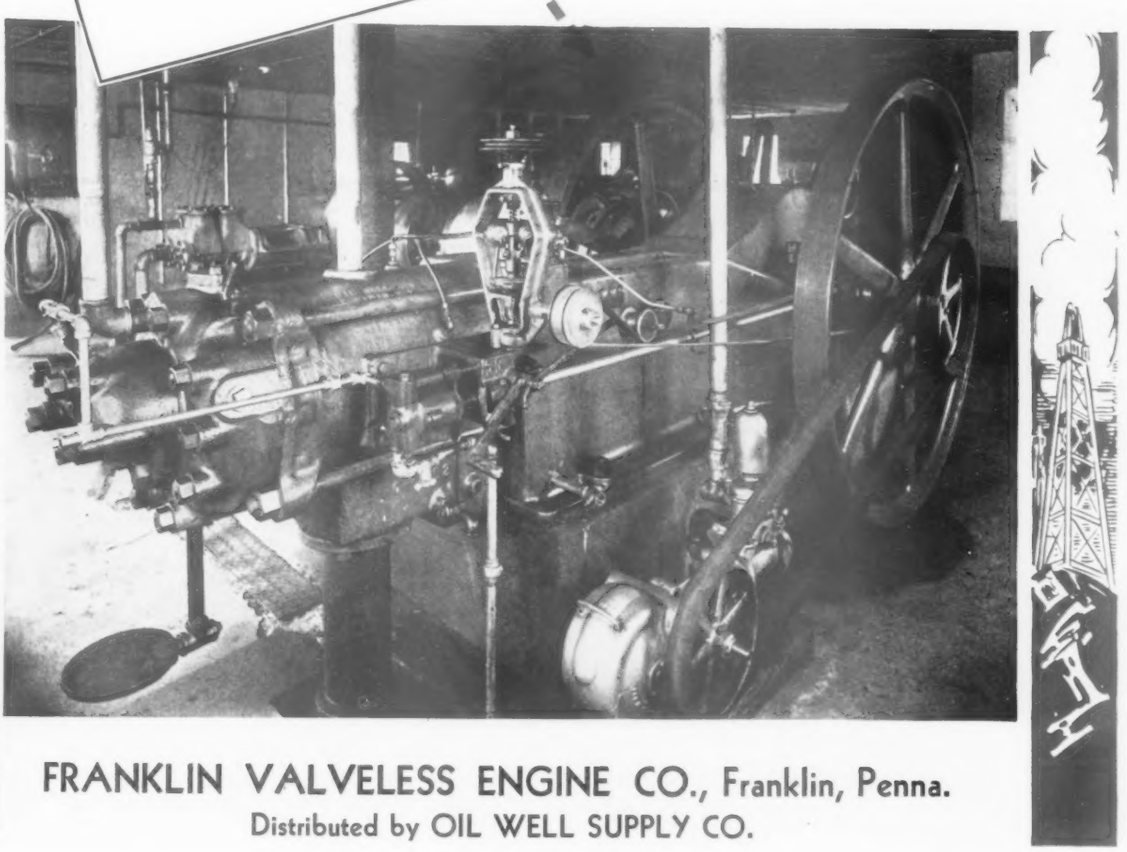

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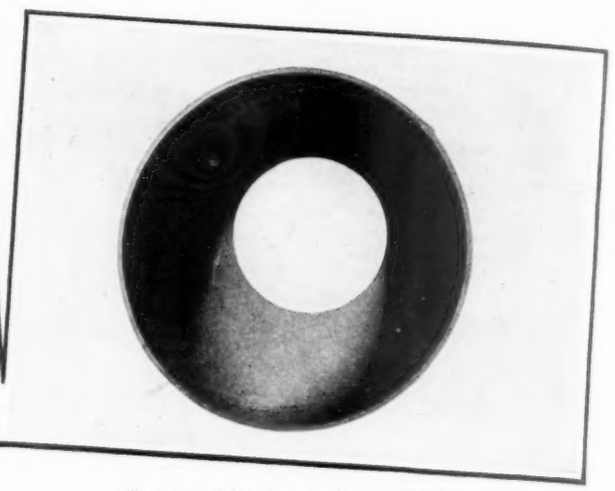

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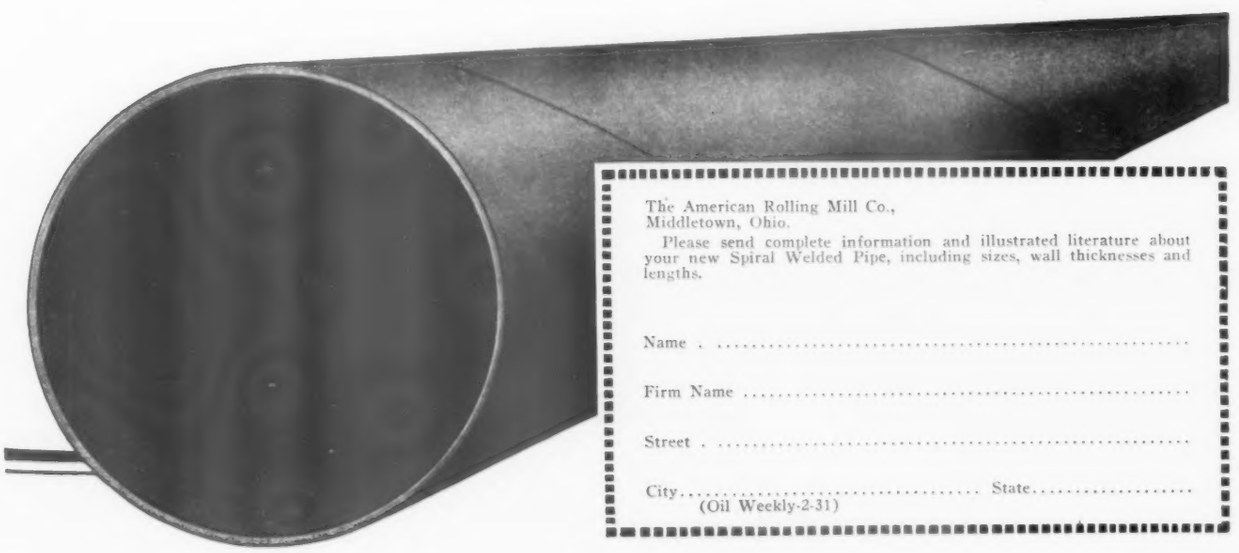

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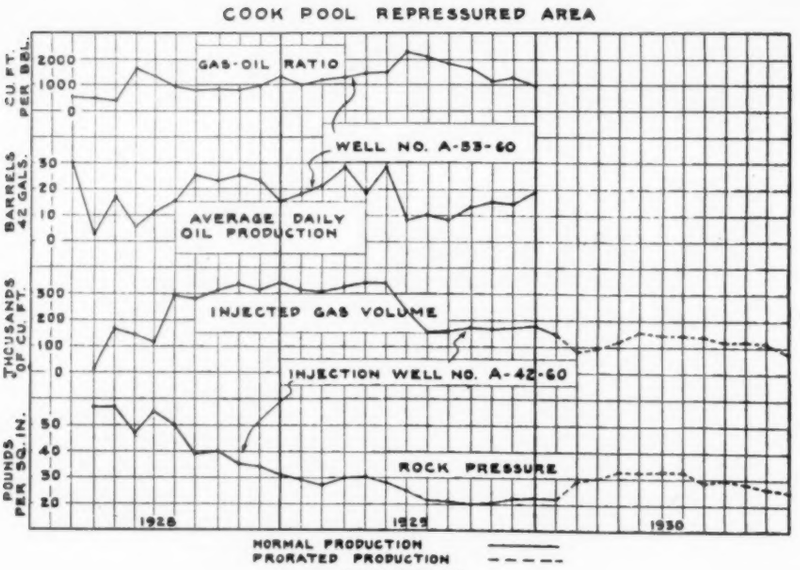

FIGURE 12
Data on Cook pool repressured area

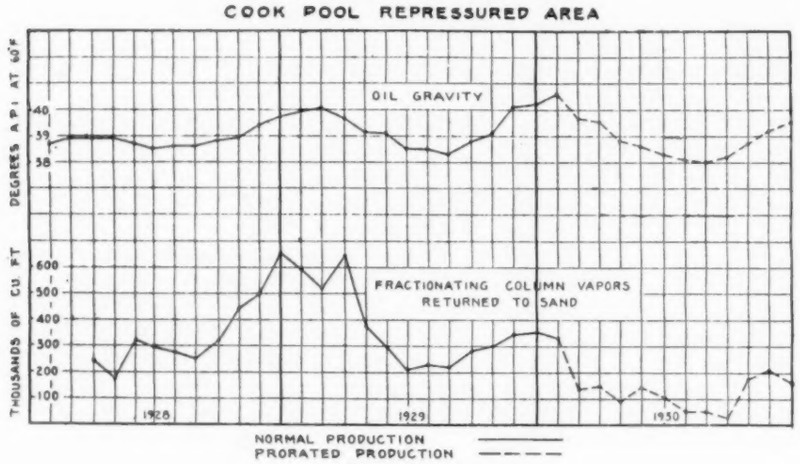

FIGURE 13
Data on Cook pool repressured area

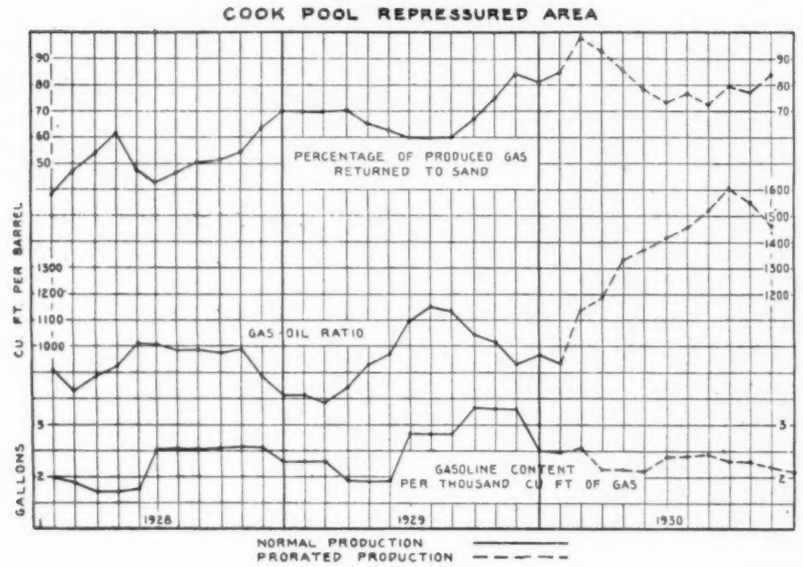

FIGURE 14
Data on Cook pool repressured area

jection wells and sealing off the sand. Filters installed at each well to catch the rust have proved a permanent remedy. The volumes injected in the various wells have varied from 25,000 to 300,000 cubic feet per 24 hours, depending on the rock pressure it was desired to maintain.

The rock pressure of each injection well is obtained at least once a month by the following method: A recording pressure gage is attached to the well head and the supply of injection gas is then shut off. The recorded pressure falls at first rapidly and then more slowly to a final constant figure. This is taken as the rock pressure. This method is open to theoretical objections but when used for practical purposes is simple and satisfactory. Rock pressures and injection volume curves are part of the permanent record of each injection well, Figure 1. The repressuring of adjoining leases of different ownerships is controlled by maintaining the original difference in rock pressure between them.

There are two main factors controlling rock pressure in a reducing field; namely, the amount of gas returned to the producing formation and the amount of gas taken from the same formation. The last factor is governed by the gas-oil ratios of the producing wells, for reducing the ratios, a number of methods of control have been tried, including back-pressure, casing gas anchor, raised working barrels, part-time pumping and variable strokes. Of these the last proved most successful, and each pumping well is now equipped with a swing post which has adjustments that permit varying the stroke of the pumping jacks to suit the producing conditions.

This pool has had two major proration periods. The first started May 18, 1927, and continued until November 1, of that year. Repressuring started during that time. The second period of proration began on January 23, 1930, and with successive cuts is still in effect. During the first proration period the wells were pumped until the allowed production was obtained, when they were completely shut in. During the present proration the casingheads have been left opened into the gas-gathering lines at all times, because the compressors now have sufficient capacity to handle all the gas produced by the property; also, because an attempt is being made to discover whether it is possible to build up the oil saturation around the producing wells by permitting gas to flow from them without producing the oil. There have been no apparent evil effects from the first period of proration and none are enticipated from the second. How-

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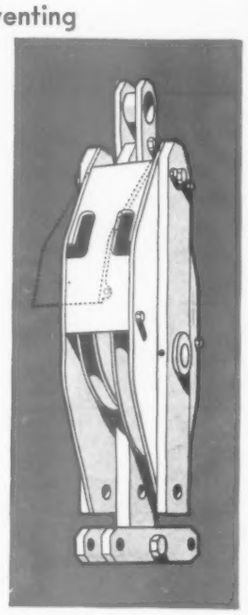

Illustration to the left shows simple method of swinging clevice to permit stringing of block.

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Maracaibo, Venezuela
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ever, proration has made it impossible to continue some of the records that would have been kept in time of normal production, particularly in the measurement of oil and gas from individual wells.

Results

The progressive effects of repressuring in the Cook pool are shown by the accompanying maps and curves. The changes in rock pressures as plotted from pressures obtained at the injection wells by the method previously explained are shown by Figures 2, 3, 4 and 5. The two curves in the upper portion of Figure 12 are typical of the gas-oil ratio and production of an individual well. From the individual well tests, Figures 6, 7 and 8 have been prepared, showing the rates of oil production in various parts of the field. The influence of the injection wells is apparent. Figures 9 10 and 11 are gas-oil ratio maps prepared from individual well tests. These maps show clearly the spread of gas from the injection wells and also the increasing number of wells that have been entirely shut in because of their high-gas-oil ratios.

The effect of continued repressuring on the physical properties of gas and oil has been the subject of some controversy. The average A.P.I. gravity of the oil produced from this pool during the past three years, together with the volume of fractionator vapors returned through the injection wells are shown in Figure 13. These fractionator vapors are composed mainly of propane and butane but their influence on the gravity of the oil is uncertain because of the seasonal character of all crude oil gravity curves. Figure 14 shows the average gasoline content of the gas taken from the producing formation, the gas-oil ratio, and the percentage of the producing gas that has been returned to the sand. The influence of proration during the year 1930 is noticeable. Figure 4 shows rate-cumulative curves plotted on semilogrithmic paper. Curve 4 represents the entire repressured portion of the field. Curve *B* represents a portion of the pool in which there have been no new wells completed since January 15, 1926. Periods of proration are represented on both curves by dotted lines.

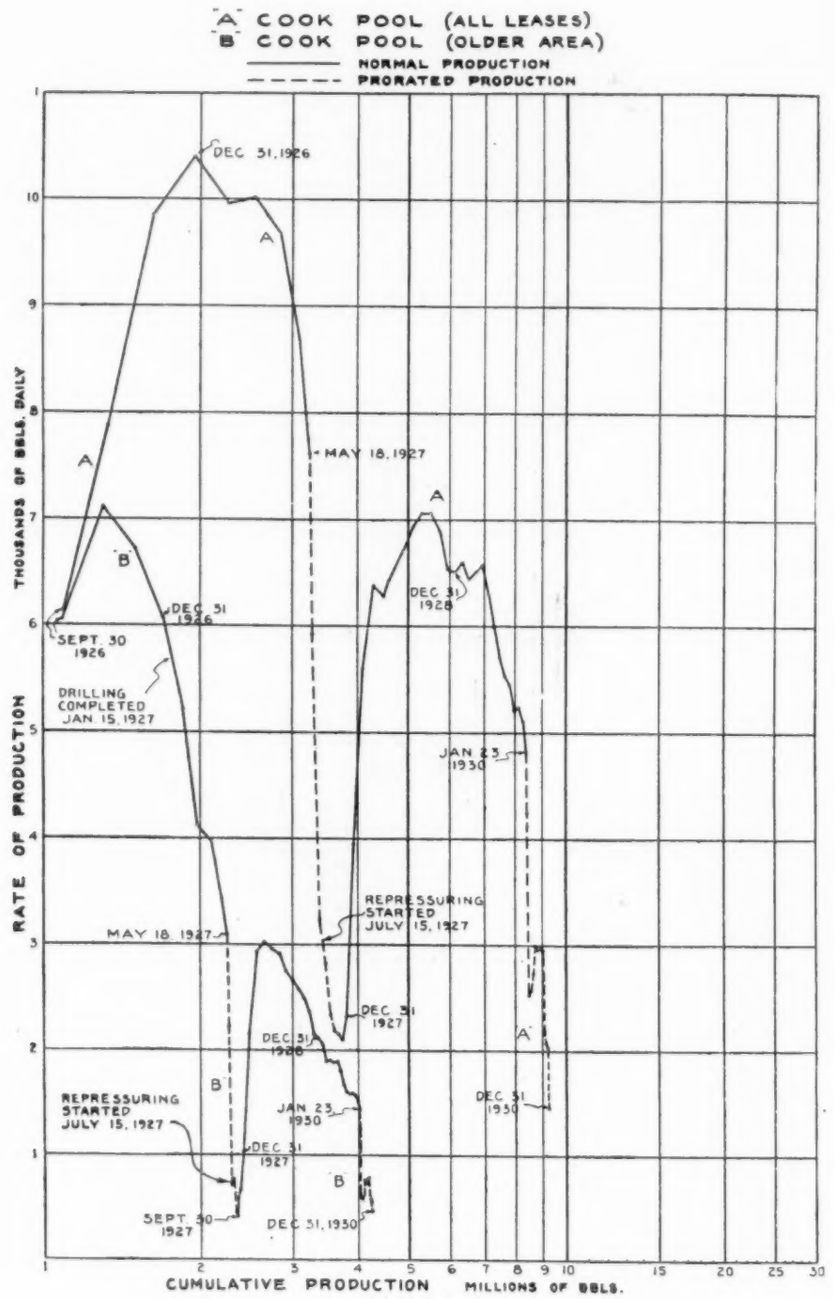

FIGURE 15
Estimated gain in ultimate recovery

Gains in ultimate recovery due to repressuring are difficult to estimate because of the uncertainty of the ultimate production under normal conditions. The usual method of projection applied to curve *B*, Figure 15, will predict an ultimate production of 5,500,000 barrels before the economic limit is reached. The predicted ultimate before repressuring would have been 2,750,000 barrels, a gain for repressuring of 2,750,000 barrels, or 100 per cent. Curve *A*, which includes the entire repressured portion of the field, projected to the line representing a rate of 300 barrels per day, shows an ultimate expectation of 15,000,000 barrels. This does not include areas outside of the main body of the pool that have not for various reasons been repressured. The 100 productive acres included in this project have produced 9,250,000 barrels, or 8409 barrels per acre. The potential production is 5000 barrels per day, the actual production because of proration is 1280 barrels per day.

The writer wishes to acknowledge his indebtedness to Roeser & Pendleton, Inc., for the use of their records and for permission to publish the paper. He is particularly indebted to Mr. Marshall R. Young for suggestions and encouragement, and to Mr. Vaughan H. Moore for assistance in the preparation of maps and curves.

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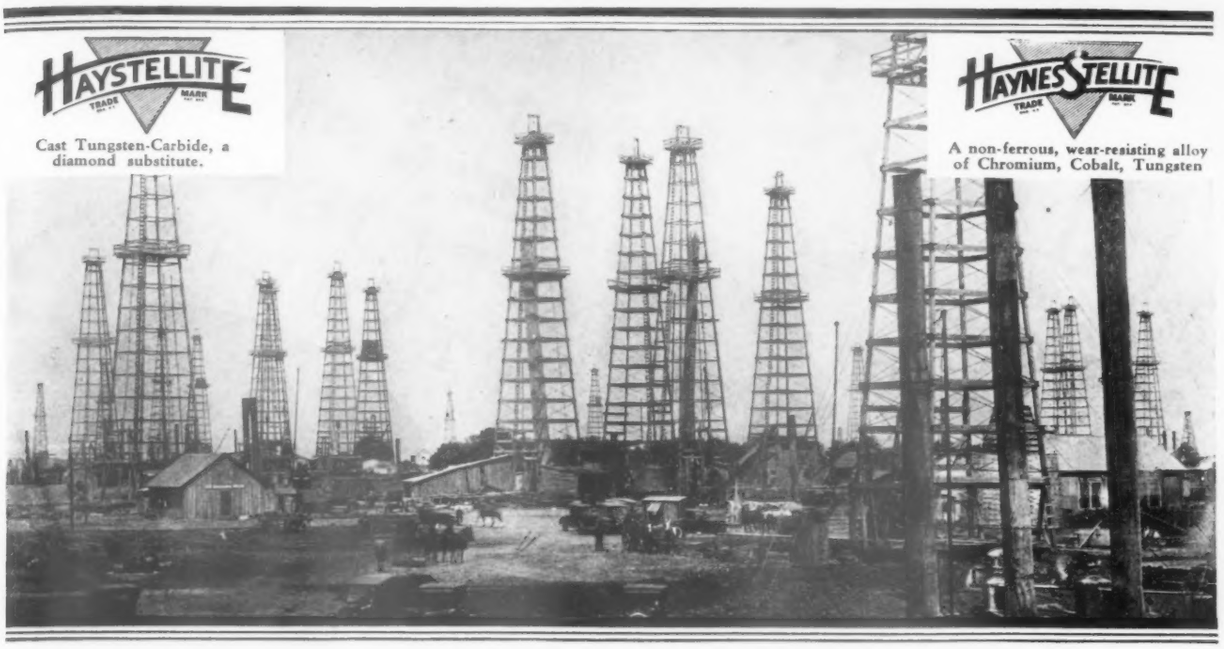

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Markets • Production • Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Rising Potential Casts Shadow on Crude Market

The whole thing wrong with the crude situation now is not the fact that production is increasing — increased production, to a moderate degree, is justified. The fact remains that the increase is coming from new sources — creating new threatening potentials — while operators in prorated areas who have sacrificed a great deal to hold back production face another price reduction as a penalty for uneconomic practices outside of their jurisdiction. With such an outlook, one begins to wonder if proration has not actually proven a boomering that missed its mark and cold-cocked the thrower. At any rate, the new uneconomic forces at work present a rather dismal outlook for the producer that may turn into a price war through which only the fittest will survive.

The situation in East Texas is perhaps more serious as a market factor than may be fully realized. With oil actually being marketed in Rusk and Gregg Counties at 35 cents a barrel, and potential marketers of crude reconciled to selling their prospective production at as low as 25 cents a barrel, its begins to look as if present posted prices will undergo a further downward revision in the near future. This situation, coupled with offers to buy large quantities of Oklahoma City oil at prices below the posted figure, has beclouded the Mid-Continent crude market. In fact, it appears doubtful now if the crude market can be maintained for very long at present prices.

If East Texas proves to be the oil octopus that it has been pictured by many, it is reasonable and logical to assume that the industry faces a long period of low oil prices that may force many operators with high-cost production to join the march to new low-cost fields. An interesting slant on the crude market structure was given a few days ago in New York, before the annual meeting of the Petroleum Division, A. I. M. E., by Joseph Pogue, showing that the crude oil potential has become a forceful influence in the course of prices. He presented proof that crude prices are headed even lower, as a result of increasing potentials. His calculations did not include the possible effect upon the price level that threatens in East Texas.

The gains recorded in crude production during recent weeks and anticipated in the near future cannot be considered greatly alarming in view of the fact that there is still a considerable margin between current production and the economic production limit for this year. The main point, however, is that the industry must not allow production to exceed the limit of 2,328,000 barrels daily, since every barrel produced above that quantity will prevent necessary withdrawals from excessive storage and prove a detriment to the price level. The demand for crude has not as yet reached the proportions to fully justify increased production, although the outlook for the near future assures a ready market for every barrel of crude produced up to a daily average of 2,328,000 barrels. Thus, until the demand increases, every barrel of oil in excess of an allowable daily average of 2,062,000 barrels between now and March 31 is assumed to be going into storage. Under this condition, the industry cannot expect to receive a higher price for oil. In fact, the factors cited in the foregoing point definitely to lower prices.

Oklahoma-East Texas Gain

Another gain in daily average crude production last week of 37,550 barrels plainly indicates a sustained upward trend. Crude production is now 2,165,250 barrels, or about 100,000 barrels a day above the low point established during the first week in January. Nevertheless, the production total is still 162,750 barrels below the economic limit prescribed for this year, as indicated on the production chart. With operators at Oklahoma City determined to pursue a program of increased production and a frenzied rush for new oil production in East Texas, there is every reason to believe that succeeding weeks will witness continued increases in crude output. The gain last week was practically all due to increased production at Oklahoma City and in the new Rusk-Gregg Counties area of East Texas.

All districts, except Kansas, Arkansas and the Gulf Coast, recorded gains in crude production last week. Oklahoma reported a net gain in daily average of 28,300 barrels; Texas a gain of 9050 barrels; California a gain of 1800 barrels, while North Louisiana, Rocky Mountain and Eastern States recorded a combined gain of 2850 barrels.

Following are the important changes in crude production which influenced the trend during the week ending February 21:

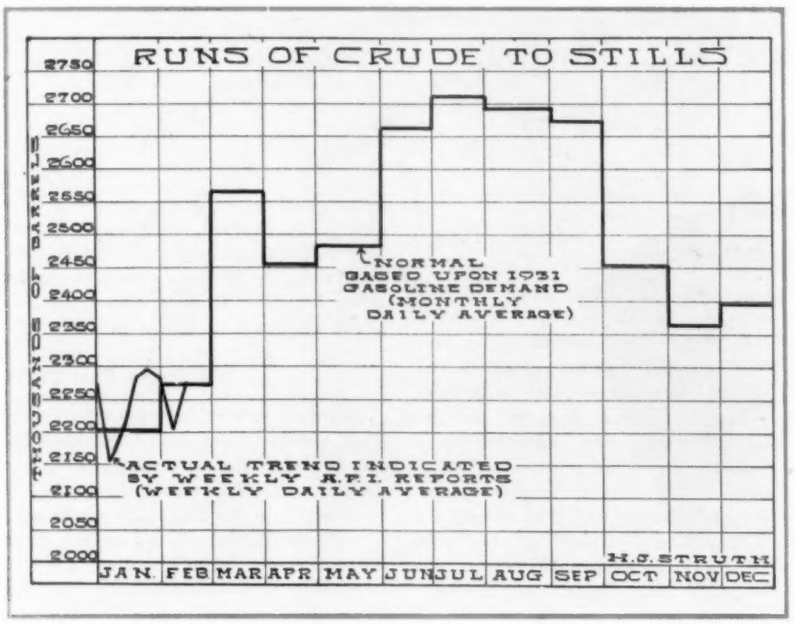
		Barrels
Rusk-Gregg Counties	Increase	13,150
Oklahoma City	Increase	13,200
Carr City	Increase	4,150
Seal Beach	Increase	1,800
Voshell	Decrease	4,650
Salt Creek	Increase	1,650

California Market Looking Up Following Drop in Stocks

The California light oil market is beginning to show a better tone and it is not an easy matter to make contracts for delivery over a considerable future period. California seems to have pulled itself out of a very bad hole, although the period of depression is not necessarily over. An improved sentiment has been helpful, but the much smaller output of the past three months has been largely responsible for the steady improvement.

California stocks dropped nearly 1,000,000 barrels during January, with heavy oil stocks tumbling 1,677,000 barrels. Light oil showed a small decrease, but any drop at this time of the year is a favorable indication. Gasoline stocks have been increasing slightly, but at this season such a rise is not unusual. The increase in naphtha distillates was

MARKET SECTION



larger than expected, but total stocks of this commodity is not necessarily excessive.

Refinery runs have been decreasing steadily, the past week showing that California refineries were operating at less than 49 per cent of capacity. Crude run to stills has closely paralleled the drop in production, but the totals of each division did not necessarily check.

The steady decrease in the number of drilling wells, particularly in the proven fields will ultimately be reflected in a much smaller potential. If Kettleman Hills is held in check, the demand for light oil, particularly in the Los Angeles basin, should increase sharply.

The movement of California products by water shows a concerted effort to lower stocks of heavy products while world markets are in the mood to purchase. It is true that much of these heavy stocks are being sold on a very narrow margin, but the cost of carrying them further has been eliminated.

Gasoline is being shipped by tanker to net back from 5½ to 6½ cents, but a slightly higher average prevails than was recorded during December.

The fuel oil market is stronger than during November and December, running from 45 cents for tank car lots to 65 cents for the best cargo stocks.

Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Week ending February 14, 1931.

(Figures in barrels of 42 gallons)

District—	Potential Daily Capacity	Potential Capacity Reporting Total	Potential Capacity Reporting Per Cent	Crude Runs to Stills Total	Crude Runs to Stills Daily Average	Crude Runs to Stills Per Cent Operated	Gasoline Stocks	Gas & Fuel Oil Stocks
East Coast	612,700	612,700	100.0	3,000,000	428,600	70.0	7,370,000	7,536,000
Appalachian	141,300	132,500	93.8	581,000	83,000	62.6	1,362,000	1,062,000
Indiana, Illinois, Kentucky	390,800	381,000	97.5	1,926,000	275,100	72.2	5,059,000	3,029,000
Oklahoma, Kansas, Missouri	461,100	412,200	89.4	1,781,000	254,400	61.7	2,994,000	3,884,000
Texas	809,000	743,500	91.9	3,915,000	559,300	75.2	6,940,000	10,022,000
Louisiana-Arkansas	266,600	262,000	98.3	933,000	133,300	50.9	1,732,000	2,367,000
Rocky Mountain	150,100	139,700	93.1	343,000	49,000	35.1	1,781,000	948,000
California	898,500	887,600	98.8	3,000,000	428,600	48.3	15,621,000	101,468,000
Total Week Feb. 14	3,730,100	3,571,200	95.7	15,479,000	2,211,300	61.9	42,859,000	130,316,000
Total Week Feb. 7	3,730,100	3,571,200	95.7	14,976,000	2,139,400	59.9	42,457,000	130,943,000
Total Feb. 15, 1930	3,650,900	3,483,400	95.4	17,408,000	2,486,800	71.4	*50,852,000	*138,654,000
The Texas and Louisiana Gulf Coastal Figures Shown Below are Included Above in the total of their respective districts.								
Texas Gulf Coast	529,500	529,500	100.0	2,974,000	424,900	80.2	5,836,000	7,632,000
Louisiana Gulf Coast	147,500	147,500	100.0	647,000	92,400	62.6	1,535,000	1,353,000

*Revised due to change in California gasoline and gas fuel stocks.

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

	Indicated Demand First Quarter 1931	Economic Limit First Quarter 1931	Actual Daily Average Week Ending Feb. 21, 1931	Excess
Arkansas	54,000	52,000	49,850	—2,150
California	547,000	500,000*	530,400	30,400
Kansas	109,000	105,000	116,150	11,150
Louisiana	73,000	71,000	71,350	350
Oklahoma	510,000	465,000*	502,550	37,550
Texas	739,000	644,000*	685,100	41,100
Balance of U. S.	236,000	225,000	209,850	—15,150
Total	2,268,000	2,062,000	2,165,250	103,250

*Allowable.

So far output of the Oklahoma City pool has failed to reach the 125,000-barrel allowed under the last order of the Oklahoma Corporation Commission.

Production for the field last week was 108,940 barrels daily, with pipe line runs averaging 109,380 barrels.

The whole petroleum industry in Oklahoma is watching the trend of output in the largest field of the state, as well as the success of Sinclair Refining Company in getting a substantial amount of oil at 67 cents a barrel, the price recently posted with a statement to the effect that as much as 50,000 barrels would be taken daily under ratable output at that price. Only two concerns have announced signing contracts at the 67-cent figure. Blackwell Oil & Gas Company and Jones Brothers Drilling Company will sell to Sinclair Oil & Gas Company. Last week the Sinclair Pipe Line Company ran 3000 barrels from properties of these two concerns. Reports of the umpire of the district were to the effect that two properties of the three owned by these

Cracked Gasoline Production

Week ending February 14, 1931

(Barrels of 42 gallons)

District	Potential Charging Capacity (Daily) Total	Reporting	Per Cent	Production Total	Daily Average
East Coast	246,900	222,900	90.3	536,000	76,600
Appalachian	45,900	43,100	93.9	101,000	14,400
Ind., Ill., Ky.	294,200	270,200	90.0	436,000	62,200
Okla., Kans., Mo.	219,900	197,900	90.0	351,000	50,100
Texas	395,500	379,400	95.9	776,000	110,900
Louisiana-Arkansas	109,400	107,900	98.6	242,000	34,600
Rocky Mountain	95,100	95,100	100.0	101,000	14,400
California	182,700	178,700	97.8	293,000	41,900
Total week Feb. 14	1,589,600	1,495,200	94.1	2,836,000	405,100
Total week Feb. 7	1,589,600	1,504,000	94.6	2,691,000	384,400
Total Feb. 15, 1930		Not Available			

The Texas and Louisiana Gulf Coastal Figures Shown Below are included in the totals of their respective districts.

Texas Gulf Coast	305,000	300,500	98.5	631,000	90,100
Louisiana Gulf Coast	77,000	77,000	100.0	176,000	25,100

Imports of Petroleum

(Barrels of 42 gallons)

	Week Ended Feb. 14	Week Ended Feb. 7
AT ATLANTIC COAST PORTS—		
Baltimore	113,000	505,000
Boston	63,000	62,000
New York	700,000	1,038,000
Philadelphia	360,000	298,000
Others	64,000	181,000
Total	1,300,000	2,084,000
Daily Average	185,714	297,714
AT GULF COAST PORTS—		
Galveston District	.....	63,000
New Orleans and Baton Rouge	.....	179,000
Port Arthur and Sabine District	.....	.....
Tampa	.....	.....
Total	.....	242,000
Daily Average	.....	34,572
AT ALL UNITED STATES PORTS—		
Total	1,300,000	2,326,000
Daily Average	185,714	332,286
Daily Average Four Weeks Ended	252,679	267,643
Distribution of Total Imports is as follows:		
Crude	939,000	1,406,000
Gasoline	245,000	282,000
Gas Oil	20,000	.....
Fuel Oil	96,000	638,000
Total	1,300,000	2,326,000

California Oil Receipts

(Barrels of 42 gallons)

	Week Ended Feb. 14	Week Ended Feb. 7
AT ATLANTIC COAST PORTS—		
Baltimore	.....	46,000
Boston	40,000	36,000
New York	110,000	175,000
Philadelphia	55,000	.....
Others	40,000	53,000
Total	245,000	310,000
Daily Average	35,000	44,286
AT GULF COAST PORTS—		
Total	.....	30,000
Daily Average	.....	4,285
AT ATLANTIC AND GULF COAST PORTS—		
Total	245,000	340,000
Daily Average	35,000	48,571
Daily Average Four Weeks Ended	47,286	57,321
Distribution of Total California Oil Receipts is as follows:		
Gasoline	165,000	267,000
Fuel Oil	80,000	73,000
Total	245,000	340,000

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
February	631,900	111,400	654,600	199,950	39,450	58,400	135,050	74,850	746,550	2,652,150	74,280,200
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December	459,300	105,550	533,400	189,300	43,000	51,100	112,200	100,500	587,450	2,181,800	67,636,500
1931											
January	452,000	106,350	511,050	188,850	41,100	50,700	110,300	96,700	535,700	2,092,750	64,874,450
February 7	468,650	109,250	514,850	190,400	43,500	50,050	108,350	103,650	527,800	2,116,500	14,815,500
February 14	474,250	119,250	518,850	185,000	44,550	49,850	108,750	98,600	528,600	2,127,700	14,893,900
February 21	502,550	116,150	527,900	183,650	44,900	49,850	109,700	100,150	530,400	2,165,250	15,156,750
Increase	28,300	.....	9,050	.....	350	.....	.....	1,550	1,800	37,550	262,850
Decrease	.....	3,100	.....	1,350	.....	.....	950	.....	.....	.....	.....

TEXAS
(Outside Gulf Coast)

PANHANDLE DISTRICT

	Feb. 21	Feb. 14
Carson County	4,150	3,750
Gray County	41,350	40,600
Hutchinson County	7,750	8,750
Wheeler County	400	300
Others	300	300
Total	53,950	53,700

NORTH TEXAS

Archer County	12,500	12,550
Burkburnett	7,600	7,600
Electra	8,700	8,700
Iowa Park-KMA	3,750	3,750
Montague and Cooke Cos.	6,200	6,200
Wilbarger	10,000	10,500
North Young County	8,400	8,500
Others	1,500	1,550
Total	58,650	59,350

WEST CENTRAL TEXAS

Brown County	3,750	3,750
Callahan County	1,500	1,500
Coleman County	850	900
Eastland-Desdemona	3,850	3,850
Jack County	900	950
Palo Pinto County	400	400
Shackelford County	3,800	3,850
Stephens County	4,600	4,600
Throckmorton County	550	550
South Young County	2,500	2,500
Others	1,250	1,300
Total	23,950	24,150

WEST TEXAS

Crane-Upton Counties	24,300	24,600
Crockett County	1,900	1,950
Ector	6,600	6,500
Howard County	26,550	27,150
Jones County	1,200	1,200
Mitchell-Scurry Cos.	2,000	2,000
Pecos County	3,400	3,500
Reagan County	29,150	31,550
Winkler County	50,050	52,000
Yates	92,250	88,700
Others	6,800	6,350
Total	244,200	245,500

EAST CENTRAL TEXAS

Boggy Creek	2,600	2,500
Corsicana-Powell	4,800	4,850
Currie	300	300
Rusk and Gregg	25,300	12,150
Mexia	3,800	3,800
Nigger Creek	200	150
Richland	100	100
Van Zandt	30,600	30,550
Wortham	600	600
Others	50	50
Total	68,350	55,050

SOUTHWEST TEXAS

Chapman-Abbott	5,800	6,000
Dale	250	250
Darst Creek	30,750	32,750
Laredo District	13,500	13,500
Luling	9,650	9,650
Lytton Springs	700	700
Salt Flat	16,300	16,400
Somerset	1,300	1,300
Others	550	550
Total	78,800	81,100
T'tl Tex. (Outside Gulf Coast)	527,900	518,850

TEXAS GULF COAST

Barbers Hill	22,600	23,000
Batson	950	900
Big Creek	2,800	2,750
Blue Ridge	1,300	1,300
Boling	700	900
Damon Mound	600	550
Esperson	2,150	2,200
Fannett	700	800
Goose Creek	4,200	4,200
Hankamar	2,550	2,550
Hull	6,300	6,800
Humble	9,700	10,250
Moss Bluff	....	200
North Dayton	450	600
Orange	1,900	2,200
Orchard	2,200	2,200
Pettus	7,300	7,450
Pierce Junction	9,050	8,400
Port Neches	1,500	1,550
Raccoon Bend	8,900	8,350
Refugio	33,500	34,000
Saratoga	600	1,100
Somerville	1,500	2,250
Sour Lake	2,000	2,000
South Liberty	2,500	2,550
Spindle Top	12,400	12,450
Sugar Land	12,000	11,900
West Columbia	4,350	4,000
Others	2,500	1,500
Total	157,200	158,900
Texas Total	685,100	677,750

OKLAHOMA

Allen	16,600	12,800
Asher	700	700
Blackwell	2,750	2,750
Bowlegs	13,750	13,150
Braman	1,950	1,850
Bristow Slick	12,500	12,100
Burbank	13,400	13,400
Carr City	14,800	10,650
Cromwell	4,800	4,800
Cushing	12,500	12,850
Davenport	900	900
Duncan District	6,850	6,850
Earlsboro	17,600	17,900
East Earlsboro	21,700	20,050
East Little River	9,550	10,250
East Seminole	1,950	1,900
Fox	950	950
Garber	3,900	4,200
Graham	2,850	2,900
Healdton	10,450	10,200
Hewitt	6,050	6,050
Hubbard	1,000	900
Konowa	15,650	15,450
Little River	24,950	23,900
Logan County	4,150	3,600
Maud	2,400	2,500
Mission	8,400	7,800
North Okmulgee	8,150	8,150
Oklahoma City	101,950	88,750
Osage (outside Burbank)	22,550	22,450
Papoose	2,050	2,050
Pearson	550	550
St. Louis	21,700	20,650
Sasakwa	4,200	3,800
Scholem Alechem	13,700	12,000
Searight	5,800	5,350
Seminole	13,600	14,500
South Earlsboro	8,200	7,350
South Okmulgee	4,500	4,500
Thomas	600	600
Tonkawa	5,150	5,000
West Asher	8,500	8,450
Wewoka	8,700	10,700
Yale Jennings	7,150	5,400
Others	32,450	32,650
Total	502,550	474,250

CALIFORNIA

Dominguez	11,300	11,100
Elwood-Goleta	31,500	31,600
Huntington Beach	21,300	21,700
Inglewood	15,000	15,000
Kettleman Hills	27,000	27,000
Long Beach	94,300	93,600
Midway-Sunset	53,000	53,000
Playa del Rey	32,500	33,000
Santa Fe Springs	71,000	70,400
Seal Beach	15,000	13,200
Ventura Avenue	45,000	45,500
Others	113,500	113,500
Total	530,400	528,600

KANSAS

Augusta-Fox Bush	3,100	3,100
Churchill	4,000	4,000
Eldorado-Towanda	13,250	13,200
Florence-Covert	850	800
Greenwood County	17,250	17,100
Oxford	2,450	2,400
Peabody-Ebling	1,600	1,600
Rainbow Bend	1,150	1,150
Russell	3,250	3,200
Sedgwick	21,000	20,800
Voshell	22,250	26,900
Others	26,000	25,000
Total	116,150	119,250

NORTH LOUISIANA

Caddo Heavy	2,850	2,750
Caddo Light	8,200	8,200
Carterville	1,700	1,850
Cotton Valley	1,900	1,900
DeSoto-Red River	2,750	2,750
Haynesville	5,650	5,650
Holly	750	750
Homer	3,350	3,350
Urania	4,850	4,850
Zwolle	11,450	11,000
Others	1,450	1,500
Total North Louisiana	44,900	44,550

LOUISIANA GULF COAST

Bayou Boullion	150	100
East Hackberry	2,450	2,600
Edgerly	800	850
Evangeline	650	500
Hackberry	800	650
Lake Barre	2,900	3,400
Lockport	4,600	4,300
Port Barre	1,650	1,700
Sorrento	50	50
Sulphur Dome	2,000	2,100
Sweetlake	1,150	1,100
Vinton	5,950	5,800
White Castle	950	950
Others	2,350	2,000
Total Louisiana Gulf Coast	26,450	26,100
Louisiana Total	71,350	70,650

ARKANSAS

Champagnolle	4,450	4,450
El Dorado	3,800	3,800
Lisbon	750	750
Nevada	1,000	1,000
Smackover Heavy	33,500	33,450
Smackover Light	4,400	4,450
Stephens	850	850
Others	1,100	1,100
Total	49,850	49,850

MOUNTAIN STATES
WYOMING

Big Muddy	1,950	1,900
Elk Basin	700	700
Grass Creek	2,000	2,100
La Barge	1,550	1,850
Lance Creek	200	150
Lost Soldier	4,350	4,300
Oregon Basin	1,900	1,900
Rock River	1,950	2,000
Salt Creek	26,900	25,250
Others	4,050	3,750
Total	45,550	43,900

MONTANA

Cat Creek	1,100	1,100
Pondera	2,300	1,950
Sunburst	4,500	4,500
Others	1,450	1,450
Total	9,350	9,000

COLORADO

Florence	400	400
Fort Collins	1,050	1,100
Moffats (Craig)	1,100	1,100
Others	1,750	1,750
Total	4,300	4,350

NEW MEXICO

Artesia	650	600
Balance Lea County	6,750	6,250
Eddy	100	100
Hobbs High	31,800	32,700
Hogback	450	450
Rattlesnake	1,100	1,150
Table Mesa	100	100
Totals	40,950	41,350
Total Mountain States	100,150	98,600

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., N. Y.)	100,350	99,500
Michigan	9,350	9,250
Total Eastern States	109,700	108,750

PRODUCTION SUMMARY

East of Rockies	1,534,700	1,500,500
Total U. S.	2,165,250	2,127,700

MARKET SECTION

producers were over-produced, while one was even with its production under proration.

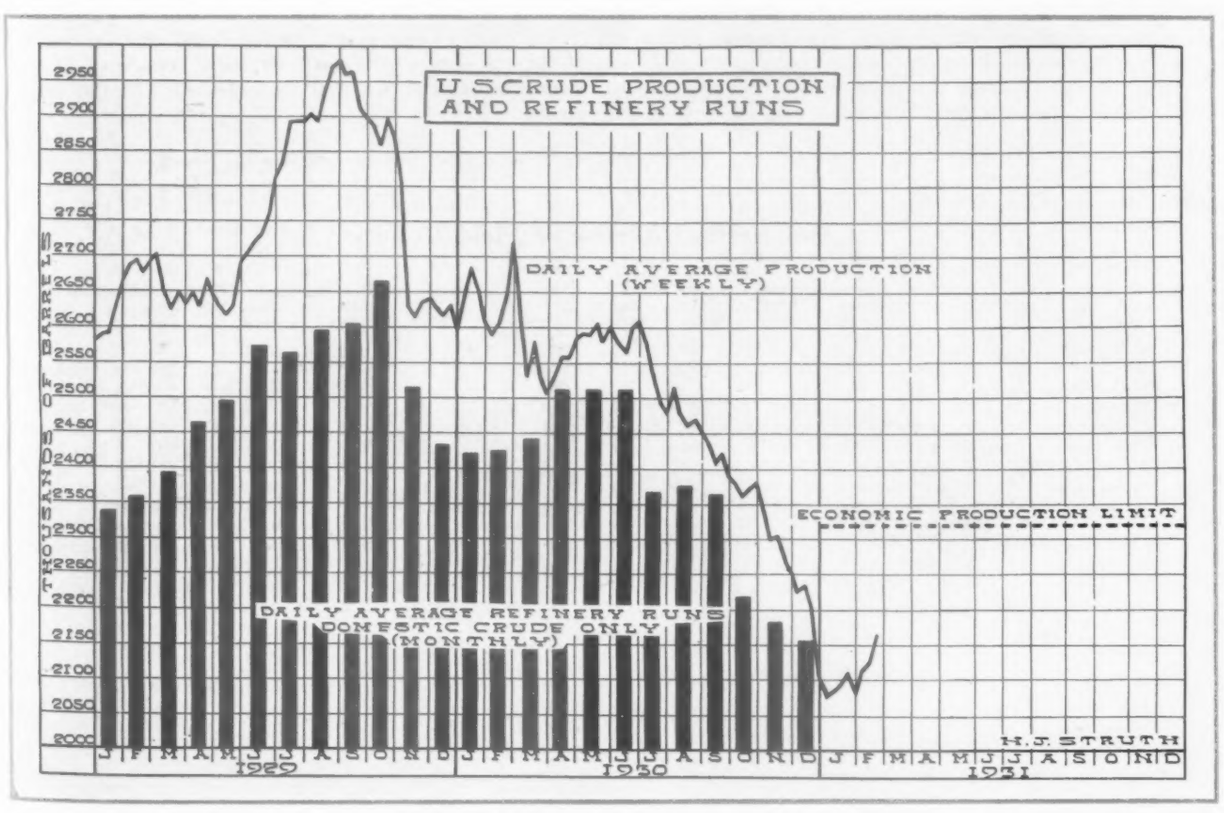
Sale of 248,000 barrels of Oklahoma City oil to Indian Refining Company for delivery to Lawrenceville, Illinois, was announced last week. This oil will be delivered through Champlin Refining Company to Texas-Empire Pipe Line Company. The sale price was not given. Indian Refining Company recently came under the control of The Texas Company.

Arrangements were completed last week whereby the Stanolind Crude Oil Purchasing Company will take oil from the Bird Creek field near Tulsa. This oil has been without market since January.

Fort Worth, Texas.—Movement of West Texas crudes via pipe lines direct to refining centers in the Middle West and East has resulted in joint tariff rates being posted by Gulf Pipe Line Company of Texas. The latter has posted a tariff of 82½ cents per barrel from Midland, which is the company's West Texas terminal, to Neville Island, near Pittsburgh, Pennsylvania, where Gulf Refining Company has a new plant. West Texas crudes moving to the latter point are routed via Lima, Ohio, and Cooks Ferry, Pennsylvania, and through the systems of Gulf Pipe Line Company of Oklahoma and also Pennsylvania, The Buckeye Pipe Line Company and Southwest Pennsylvania pipe lines. A joint tariff of 77¼ cents per barrel applies from Midland to Bayshore, near Toledo, Ohio, using all the above lines, except that of the Southwest Pennsylvania pipe lines. In addition to these trunk line charges, a tariff of 20 cents per barrel for gathering charges applies.

Wichita Falls, Texas.—Substantial reduction in pipe line tariffs have been made by the principal common carriers serving independent refiners near Wichita Falls with North Texas district crude in order to combat encroachment upon this market by foreign crudes and also to help owners of prorated wells. A cut of from 2½ to five cents per barrel was put into effect February 16 on most hauls. Waggoner Pipe Line Company reduced its tariff from the South Vernon and Electra districts to Wichita Falls five cents per barrel, making the new tariff 12½ cents per barrel. The Texas Pipe Line Company announced on the above date that shipments made from wells in Burkburnett and Electra fields to Wichita Falls would be cut from 15 to 12½ cents per barrel, while the Holliday, and Wilson Ranch districts also will have a 12½-cent tariff, as compared to 17½ cents previously. A rate of 20 cents per barrel applies on crude movement from the Olney and New Castle districts, North Young County, to Wichita Falls.

Wichita Falls, Texas.—Olney Oil & Refining Company is preparing to construct about 12 miles of four-inch line from its refinery near Olney to the New Castle district in North Young County so as to take on additional crude supplies. This concern has heretofore derived the bulk of its crude supply from the Riggs and Olney fields.



MARKET SECTION

Weekly Comparisons of Permits Granted for New Wells

	Week Ending Feb. 21	Previous week	This week 1930	Total this Month	This month 1930	Total this year	Total this date last year	1930 year total
Arkansas	4	..	..	8	9	12	20	108
California	8	5	25	22	64	48	121	922
Louisiana	7	10	..	19	33	61	98	948
Kansas	11	10	13	35	72	89	133	944
Oklahoma	34	13	46	72	131	191	379	2,830
Texas	97	71	124	149	539	630	1,091	7,052
Total	161	109	208	405	748	1,031	1,942	12,804

ENGINEERS INJECT ECONOMICS

(*Continued from page 33*)

commended a mean average annual gasoline stock of about 40,000,000 barrels.

Joseph E. Pogue presented a most constructive view of the causes of low oil prices, alluding to the potential as having a direct bearing upon the crude price level. Through a chart he showed how the potential supply of crude has become an influencing factor in the course of crude prices. His calculations evolved a plan of figuring inventories of crude on a basis of combined above-ground and underground storage and showed how the factor of potential has entered into the price situation during the past two years. Figure 2 shows Mr. Pogue's chart and offers proof that the oil potential is a vital factor today in the crude market structure of the oil industry. Mr. Pogue stated that if all drilling ceased, the potential would be sufficient to maintain the supply of crude petroleum in over-all balance with demand for approximately 28 months. At the end of this period a price of $1.75 for Mid-Continent crude would be indicated. Under subnormal drilling, with an annual initial of 2,500,000 barrels, it would require 50 months to eliminate the crude oil potential. He stated that since complete cessation of drilling is not practicable, it follows that the industry must be prepared to endure low crude oil prices until the potential is substantially reduced. Therefore, it was stated by Mr. Pogue, the reduction in above-ground inventories will not alone suffice.

Wichita Falls, Texas.—Nortex Pipe Line Company has been organized by the Buttram Petroleum Company, Oklahoma City, and others to build and operate about 10 miles of gathering lines in southwestern Jack County to connect up with pumping leases cut off by Prairie Pipe Line Company at the close of 1931. Arrangements have been made to deliver the oil into the lines of The Texas Pipe Line Company near Bryson, and the oil will be purchased by The Texas Company in accordance with the Central West Texas proration schedule. Buttram Petroleum Company has about 27 pumpers that are to be aided by this arrangement.

Summarized Review of Field Results

	Completions		Oil Wells		Gas Wells		Failures		Initial Prod.	
	This week	Last week	This week	Last week	This week	Last week	This week	Last week	This week	Last week
Arkansas	2	3	1	..	..	1	1	2	40	..
California	12	16	10	9	..	..	2	7	4,290	10,950
Indiana	9	..	2	..	4	..	3	..	105	...
Kansas	11	9	3	4	2	2	6	3	1,470	1,560
Kentucky	4	5	2	2	..	2	2	1	170	52
Louisiana	12	18	5	2	2	4	5	12	2,342	652
Michigan	6	6	3	1	..	1	3	4	575	228
Mississippi	1	2	..	..	..	1	1	1	...	...
New Mexico	1	1	1	1	..	..	..	..	3,890	700
Ohio	21	26	4	8	10	12	7	6	232	151
Oklahoma	23	24	13	12	7	4	3	8	95,635	49,085
Pennsylvania	14	6	6	1	5	3	3	2	23	1
Texas	61	74	35	32	6	7	20	35	19,667	38,861
West Virginia	13	14	..	1	11	11	2	2	...	5
New York	2	1	2	..	..	..	..	1	6	...
Illinois	2	2	1	1	..	..	1	1	4	5
Total	194	207	88	74	47	48	59	85	128,449	102,250
Increase	..	..	14	..	..	..	..	..	26,199	...
Decrease	13	..	..	..	1	..	26	..	...	...

MARKET SECTION

Crude Oil Price Quotations

(Revised to February 24, 1931

▼ ▼ ▼

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.) (Effective Nov. 13, 1930) $2.15

Penna. Grade Oil in National Transit Lines (Other Pennsylvania) (Effective, Nov. 13, 1930) 1.85

Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania) (Effective Nov. 13, 1930) 1.80

Penna. Grade Oil in Eureka Pipe Lines (West Virginia) (Effective Nov. 13, 1930) 1.70

Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.) (Effective Nov. 13, 1930) 1.45

Corning Grade in Buckeye Pipe Lines (Ohio) (Effective Oct. 28, 1930)..... 1.25

Somerset Oil in Eureka Pipe Lines (Effective July 23, 1930) 1.14

Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 9, 1929)... 0.60

*Oil run prior to July 1, 1929 is $2.10 per bbl.

(Posted by Stoll Oil Refining Company)

Oil City, Ky., oil in Stoll lines (Effective Nov. 8, 1930 ..... 1.00

MICHIGAN

(Posted by Dixie Oil Company)

Traverse and Dundee (Muskegon), effective April 16, 1930, same gravity and price schedule as Prairie posts in Oklahoma and Kansas, on gravity basis prior to reduction on Oct. 27, 1930.

(Posted by Pure Oil Company)

Midland, Midland County, Oct. 27, 1930..$1.10

CENTRAL STATES FIELDS

(Posted by Ohio Oil Company)

(Effective Oct. 28, 1930)

Wooster	$1.35	Princeton	1.30
Lima	1.10	Illinois	1.30
Waterloo	1.20	Plymouth	.88
Indiana	.87	W. Kentucky	1.15

CANADIAN CRUDE

(Posted by Imperial Oil Refineries, Ltd.)
(Effective October 28, 1930)

Petrolia $1.50
Oil Springs 1.57

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co., and Stanolind Crude Oil Purchasing Company, Effective Nov. 1, 1930. Carter Oil Company Same Schedule Effective Oct. 28.

Below 29	$0.65	35-35.9	.92
29-29.9	.69	36-36.9	95
30-30.9	.73	37-37.9	.98
31-31.9	.77	38-38.9	1.01
32-32.9	.81	39-39.9	1.04
33-33.9	.85	40 and above	1.07
34-34.9	.89		

Magnolia Petroleum Company Effective October 28

Below 26	.53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here to 40 and above gravity same schedule as above.

NORTH TEXAS

North Texas Crude in Wichita, Wilbarger, Archer and Northern Young counties:

All Purchasers

(Effective Jan. 14, 1931)

Below 29 gravity	$ .55
29-29.9	.57
30-30.9	.59
31-31.9	.61
32-32.9	.63
33-33.9	.65
34-34.9	.67
35-35.9	69
36-36.9	.71
37-37.9	.73

(Continued on page 58)

California Prices

Effective September 15, 1930, at 7:00 A. M. the following are the current prices offered by STANDARD OIL COMPANY OF CALIFORNIA

Gravity	Signal Hill	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Playa del Rey†
14-14.9	$ .70	$ .70	$ .70	$ .70	$ .70	$ .70			$ .70	$ .70	3 .70	$ .70	$ .70		$ .55	$ .55	$ .55	$ .55	$ .55	$ .55	
15-15.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
16-16.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
17-17.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
18-18.9	.76	.76	.76	.76	.76	.76			.76	.76	.76	.71	.76		.55	.62	.62	.62	.62	.62	
19-19.9	.82	.82	.82	.82	.82	.82			.82	.82	.82	.77	.82		.55	.70	.70	.70	.70	.70	
20-20.9	.88	.88	.88	.88	.88	.88			.88	.88	.87	.83	.87			.78	.78	.78	.78	.78	$.74
21-21.9	.94	.94	.94	.94	.94	.94			.94	.94	.93	.90	.93	$.92		.86	.86	.86	.86	.86	.77
22-22.9	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	.98	.97	.98	.95		.94	.94	.94	.94	.94	.81
23-23.9	1.07	1.07	1.07	1.07	1.07	1.07			1.07	1.07		1.05	1.04	1.01		1.02	1.02	1.02	1.02	1.02	.84
24-24.9	1.12	1.12	1.12	1.12	1.12	1.12	$1.12		1.12	1.12		1.08	1.08	1.05		1.06	1.06	1.06	1.04	1.04	.87
25-25.9	1.17	1.17	1.17	1.17	1.17	1.17	1.17		1.17	1.17		1.11	1.12	1.09		1.10	1.10	1.10	1.06	1.06	.90
26-26.9	1.22	1.22	1.22	1.22	1.22	1.22	1.22		1.22	1.22		1.15	1.16	1.13		1.14	1.14	1.14	1.08	1.08	
27-27.9	1.26	1.26	1.26	1.26	1.26	1.26	1.27		1.26	1.26		1.19	1.21	1.18		1.18	1.18	1.18	1.11	1.10	
28-28.9	1.30	1.30	1.30	1.30	1.30	1.30	1.32		1.30	1.30		1.23	1.25	1.23		1.23	1.23	1.23	1.15		
29-29.9	1.34	1.34	1.34	1.34		1.34	1.37			1.34		1.26	1.29	1.28		1.29	1.29	1.29	1.19		
30-30.9	1.38	1.38	1.38	1.38		1.38	1.42			1.38		1.29	1.33	1.33		1.35	1.35	1.35	1.23		
31-31.9	1.43	1.43	1.43	1.43		1.43	1.43							1.38		1.41	1.41	1.41	1.27		
32-32.9	1.48	1.48	1.48	1.48			1.52							1.43		1.47	1.47	1.47	1.31		
33-33.9							1.57							1.48		1.53	1.53	1.53	1.35		
34-34.9							1.62	$1.32						1.53				1.59	1.39		
35-35.9							1.66	1.39						1.58				1.65	1.43		
36-36.9							1.72	1.46						1.63							
37-37.9							1.78	1.53						1.68							
38-38.9							1.84	1.60						1.73							
39-39.9							1.90	1.66						1.78							
40-40.9							1.96	1.72													
41-41.9							2.02	1.78													
42-42.9							2.08	1.84													

KETTLEMAN HILLS*	
35-39.9	$1.10
40-44.9	1.20
45-45.9	1.35
50-54.9	1.50
55 and above	1.65

*Posted by Union Oil Company. †Effective December 18, 1930.

MARKET SECTION

▼ ▼ CRUDE OIL PRICE QUOTATIONS ▼ ▼

(Continued from page 57)

38-38.9	.75
39-39.9	.77
40 and above	.79

Ranger, North Texas except as listed above, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran, and Nocona crudes:

All Purchasers
(Effective Jan. 14, 1931)

Below 29 gravity	$ .65
29-29.9	.69
30-30.9	.73
31-31.9	.77
32-32.9	.81
33-33.9	.85
34-34.9	.89
35-35.9	.92
36-36.9	.95
37-37.9	.98
38-38.9	1.01
39-39.9	1.04
40 and above	1.07

PANHANDLE

All Purchasers
(Effective Jan. 14, 1931)
Gray County Crude

Below 29 gravity	$ .48
29-29.9	.50
30-30.9	.52
31-31.9	.54
32-32.9	.56
33-33.9	.58
34-34.9	.60
35-35.9	.62
36-36.9	.64
37-37.9	.66
38.38.9	.68
39-39.9	.70
40 and above	.72

All Purchasers
(Effective Jan. 14, 1931)
Carson and Hutchinson County Crude

Below 29 gravity	$ .43
29-29.9	.45
30-30.9	.47
31-31.9	.49
32-32.9	.51
33-33.9	.53
34-34.9	.55
35-35.9	.57
36-36.9	.59
37-37.9	.61
38-38.9	.63
39-39.9	.65
40 and above	.67

WEST TEXAS

Posted by All Purchasers, Effective October 28, 1930
Winkler and Pecos County Crudes:

Below 25	$ .55	31-31.9	.69
25.25.9	.57	32-32.9	.71
26-26.9	.59	33-33.9	.73
27-27.9	.61	34-34.9	.75
28-28.9	.63	35-35.9	.77
29-29.9	.65	36 and above	.79
30-30.9	.67		

Crane, Upton, Crockett, Ector, Ward, Loving, Matchell,* Howard, and Glasscock Counties, Texas, and Lea County, New Mexico crudes
Posted by All Purchasers, Effective Oct. 28, 1930

Below 25	$ .50	31-31.9	.64
25-25.9	.52	32-32.9	.66
26-26.9	.54	33-33.9	.68
27-27.9	.56	34-34.9	.70
28-28.9	.58	35-35.9	.72
29-29.9	.60	36 and above	.74
30-30.9	.62		

*Magnolia Petroleum Company uses Gravity scale and Coltex Refining Company pays flat price of 60 cents for Mitchell County.

GULF COAST

(Posted by Humble Oil & Refining Company, The Texas Company and Sun Company)

Gulf Coast Crude will be classified as follows in fields designated below:

Goose Creek, Hull, Boling, Liberty, Orange, Pierce Junction, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugar Land, West Columbia and Humble crudes:

"A" GRADE—All crudes conforming to the following tests:

Viscosity—Not less than 100 seconds at 100° F. Saybolt.

Sulphur—Not over .4%.

Beaume Gravity—Not over 25 at 60° F.

Cold test of distillates having a viscosity of 1000 seconds at 100° F, shall not be over 5° F.

"A" GRADE—$ .80.

"B" GRADE—Embraces all Coastal crude which does not meet the test for "A" grade crude:

All Purchasers
(Effective Jan. 14, 1931)

High Island	$ .75		
Grade "A"	.80		
Grade "B"			
Below 25	$ .69	33-33.9	.87
25-25.9	.71	34-34.9	.89
26-26.9	.73	35-35.9	.91
27-27.9	.75	36-36.9	.93
28-28.9	.77	37-37.9	.95
29-29.9	.79	38-38.9	.97
30-30.9	.81	39-39.9	.99
31-31.9	.83	40 and above	1.01
32-32.9	.85		
Jennings, La.	.80		
Markham (The Texas Company)	.69		

SOUTHWEST TEXAS

All Purchasers
(Effective Jan. 14, 1931)

Refugio Heavy crude, below 25 gravity	.69		
Refugio Light crude:			
25-25.9	$ .71	33-33.9	.87
26-26.9	.73	34-34.9	.89
27-27.9	.75	35-35.9	.91
28-28.9	.77	36-36.9	.93
29-29.9	.79	37-37.9	.95
30-30.9	.81	38-38.9	.97
31-31.9	.83	39-39.9	.99
32-32.9	.85	40 and above	1.01
Mirando crude	$ .69		
Salt Flat crude	.90		
Darst Creek crude	.90		
Pettus crude	1.10		
Luling	.75		
Corsicana, heavy	.75		

Determination of quality, deductions, adjustment for temperature, etc., on oil purchased in Texas, shall be in accordance with the rules and regulations of the Texas Railroad Commission, and on oil purchased in New Mexico shall be in accordance with the rules and regulations of the Corporation Commission of New Mexico.

LOUISIANA-ARKANSAS

All Purchasers Except Magnolia Petroleum Co., Effective Oct. 29, 1930
Pine Island District, Haynesville District, Bull Bayou District, El Dorado District, Rainbow District, Cotton Valley

Below 29	$ .65	37 to 37.9	.98
29 to 29.9	.69	38 to 38.9	1.01
30 to 30.9	.73	39 to 39.9	1.04
31 to 31.9	.77	40 to 40.9	1.07
32 to 32.9	.81	41 to 41.9	1.10
33 to 33.9	.85	42 to 42.9	1.13
34 to 34.9	.89	43 to 43.9	1.16
35 to 35.9	.92	44 and above	1.19
36 to 36.9	.95		
Urania, La.	.75		
Bellevue, La	1.00		

Magnolia Petroleum Company, Effective October 30, 1930

Below 26	$ .53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here prices same as schedule above.

STEPHENS

Below 29	$ .54	31 to 31.9	.66
29 to 29.9	.58	32 and above	.70
30 to 30.9	.62		
Smackover	.70		
El Dorado, East Field	.70		

ROCKY MOUNTAIN FIELDS

(Salt Creek prices effective Oct. 28, 1930)

‡Salt Creek	29-29.9		.69
" "	30-30.9		.73
" "	31-31.9		.77
" "	32-32.9		.81
" "	33-33.9		.85
" "	34-34.9		.89
" "	35-35.9		.92
" "	36-36.9		.95
" "	37 and above		.98
Elk Basin (Effective Oct. 28, 1930)			.125
Grass Creek light			1.25
Big Muddy			1.00
Lance Creek			1.33
Rock Creek			1.01
Mule Creek			1.20
Rex Lake			1.10
‡Osage (Nov. 1, 1930)			.85
‡Cat Creek, Montana			1.25
Pondera			1.45
Sunburst, Montana			1.55
‡Hogback, New Mexico			1.40
Artesia, New Mexico			.75

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

STATE CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market value.

Montana—Two per cent of gross value at well.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

IDEAL

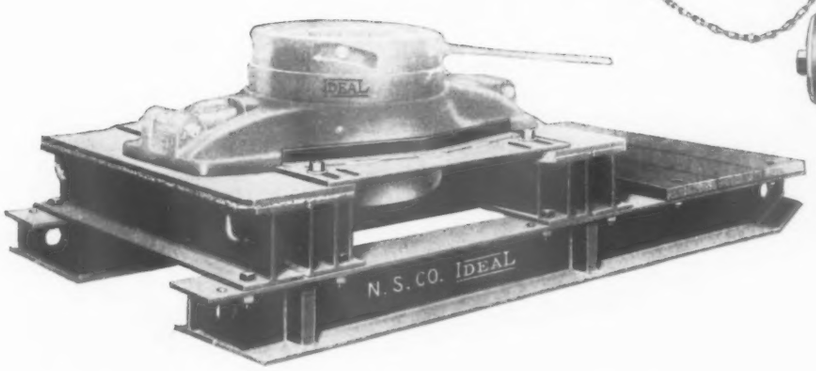
"Reg. U. S. Pat. Off."

AUTOMATIC GRIP

ELEVATOR

SPIDER

SPIDER SUB BASE



THE NATIONAL SUPPLY COMPANIES

Oil Relief

(*Continued from page 23*)

exempted from the blanket postponement of tariff legislation, but without avail, the committee rejecting such suggestions by a vote of seven to 13.

Representatives of the independent producers in Washington expressed great disappointment over the action of the committee, which probably brings to an end a fight which has been waged for many weeks. Members of the house from the oil states declared they would "repudiate" the action of the committee, pointing out that six of the seven votes in favor of permitting oil legislation to come up were democratic.

WASHINGTON, D. C.—Proposals for settlement of the controversy over the Capper-Garber bill embargoing oil imports were under consideration by leaders of the independent oil producers and were laid before the house ways and means committee this week in a final effort to secure some action before congress adjourns.

The plan presented involved the holding up of all imports until the Federal Trade Commission adopted a proration plan under agreement with the importers, with all crude imports in excess of the quantity agreed upon paying a duty of $1.19 per barrel, offsetting the difference in the cost of production here and in Venezuela. Imports of refined products would be virtually embargoed through imposition of a 100 per cent ad valorem duty.

The inclusion of the duty provisions in the plan is believed to have spelled its defeat, since congress this session has consistently avoided any consideration of tariff matters.

Members of the governors' oil relief conference are expressing certainty that the Geneva treaty dealing with tariff embargoes and barriers would prevent the operation of the Capper-Garber bill, although the State Department has not yet made public its views on the question. The department, however, is understood to be ready to advise congress whenever requested, although the fact that this information has not yet been asked for would indicate that leaders believe that the treaty bars any embargo action.

The Hoover administration is considerably disturbed over the oil situation and is understood to favor the compromise plan which is now being worked out, with the possible exception of the tariff features, but members of the industry themselves are not a unit on the question, their point of view apparently hinging on whether they do or do not have large stocks of oil.

The proposal to have the Federal Trade Commission make an agreement with oil importers regarding the volume of South American oil to be brought in would relieve the latter of any fear of prosecution by the government under the anti-trust laws. The basis for the agreement would be provided in the legislation by a stipulation that importations were to be no greater, average production per well, than the average production of American wells. This would keep imports at a consistent proportion of domestic production, based on the number of wells in Venezuela compared with the number in the United States.

Opposition of the oil importers to the new scheme is as pronounced as their objection to the Capper-Garber bill, it being declared that imports last year were below those of 1929 and are still declining. This opposition, it is indicated, is based on the fear that the proration might be figured on Oklahoma City field flush production. Limitation on the basis of production of the United States as a whole might, however, be accepted, it was intimated.

An effort will be made before adjournment next week to secure action on the resolution of Senator Nye of North Dakota for a thorough investigation of the oil industry by a senate committee. This might make possible some action next session, although independent operators assert that further delay in affording them relief will put many of them out of business.

Much Interest in Foreign Conference at Exposition

Los Angeles.—Facilities offered by the new buildings erected by the Oil Equipment and Engineering Exposition will help to make the second annual show, March 16 to 22, the outstanding oil event of the year. This is the only oil show during 1931 and many manufacturers are taking advantage of it to furnish the industry with displays of equipment that will call attention to late developments in tools and machinery. The engineering societies will hold meetings for the discussion of operating methods.

Increased interest is being shown in the export meeting which will be held in the Technical Hall at the exposition on Wednesday evening March 18. The committee appointed to arrange the details for this meeting have invited the following men to address it: R. E. Leigh, foreign representative, Gulf Publishing Company; Dr. Julius Klein, assistant Secretary of Commerce, Washington, D. C.; W. Cole, foreign representative, Byron-Jackson Company; V. M. Korobovkin, technical director, Amtorg Trading Corporation, New York; R. L. Dudley, president, Gulf Publishing Company.

Many subjects of vital importance to all interested in the export market will be discussed. Besides general subjects relative to present prospects and activities in other countries, the conditions of operation and their potentiality as markets, many specific topics will be taken up. The patent situation will require study and will be given considerable attention; the receipt of equipment and methods of handling it after reaching foreign fields will be described; and conditions affecting service, installation and maintenance of stocks will be discussed. Export trade is becoming of increased importance and it is felt that the data and information presented by those who have recently returned from foreign countries, who have studied the situation and who are well versed on the conditions affecting it will be of value.

The American Institute of Mining and Metallurgical Engineers will present four papers on straight hole practice. Instruments for surveying completed wells will be described and the present methods in use for determining the direction in which a well deviates from the vertical will be discussed in detail. Other instruments now being used extensively for measuring the angle at which the hole is inclining during drilling operations have come in for a great deal of attention and the several kinds which have been developed will be described.

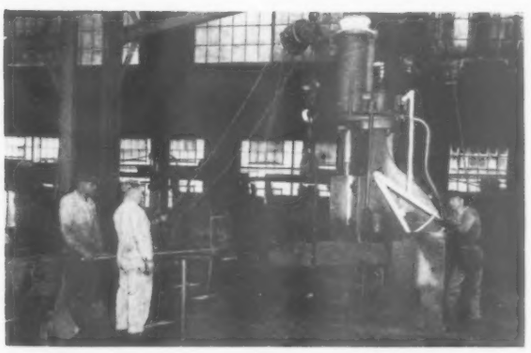
The American Welding Society will discuss both the electric arc and the oxy-acetylene methods of welding. The technical meeting will be held in the evening and will be preceded by a dinner served in the meeting room provided

KEEP THAT HOLE STRAIGHT WITH
REED REAMERS

The very first Reed bit was equipped with a reamer directly behind the bit head for keeping the hole straight, round and full gauged. From that early date till now straight hole has been a major concern. And no tool offered the industry today has in it the wealth of material, design and workmanship that go into the make-up of every Type 31 Reed Single or Double Three Point Reamer.

Reamer billet stock is made up by the mill to Reed specification, and every billet is checked against those specifications.

●



Under giant air hammers the billet assumes rough shape for either single or double three point reamers.

●

Every reamer body is heat treated in the rough before going to the machine shop.

●

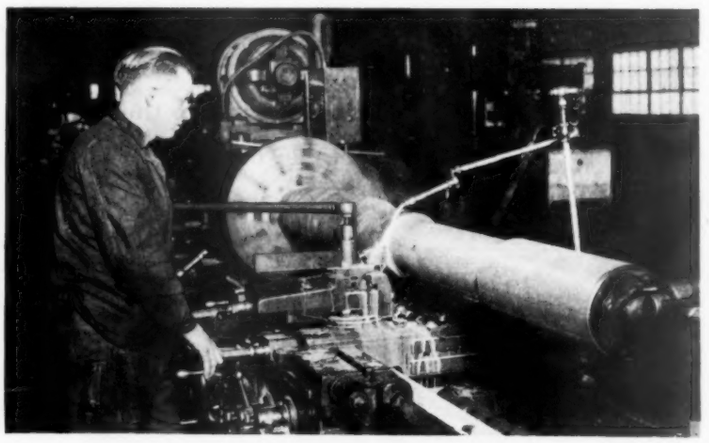
Type 31 Single Three Point Reamer with tool joint pin on either end.

All reamers are ordinarily furnished with A. P. I. connections, made integral with reamer body, but can be furnished with any connection to suit customer

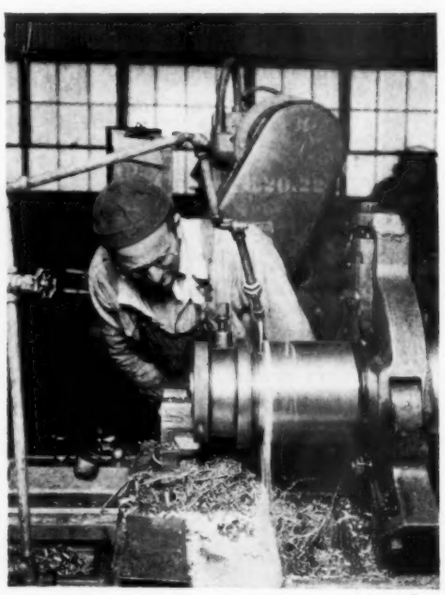
GOOD HOLE INSURANCE » » » »

can always be assured through the use of Reed Reamers. A Single Three Point Reamer directly above the bit head is good. A Double Three Point Reamer directly above the bit head is better. Two Double Three Point Reamers in tandem, or separated by a drill collar is ideal. In some digging, reamers may be used to advantage in the string of pipe.

Type 31 Reed Double Three Point Reamer with tool joint pin down and box up, made integral.



After heat treatment, reamer billet is first rough turned and bored for slush passageway.



Careful threading of every reamer is essential if many field troubles are to be eliminated.

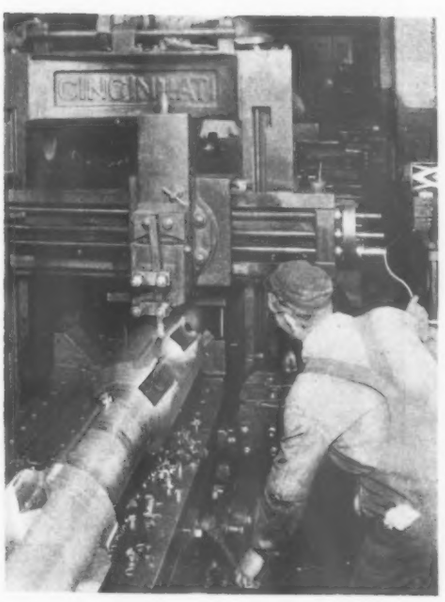
The next operation is that of milling cutter pockets and slots for hardened steel blocks.

In ordering specify threading desired and whether connection is to be pin or box.

» » » » GOOD BUSINESS INSURANCE

is economy with Reed Reamers. Reamers may be furnished either with cutters or with smooth rollers, as desired, or with combination of both. After hole is straight, round and full gauged, reamer rollers assist in maintaining that type of hole and in building up the wall of the hole.

Accurate machining of reamer cutter pockets and slots for hardened steel pin blocks follows the first milling operation.



Then reamer goes to planer and the ample hole clearance of Reed Reamers is established.

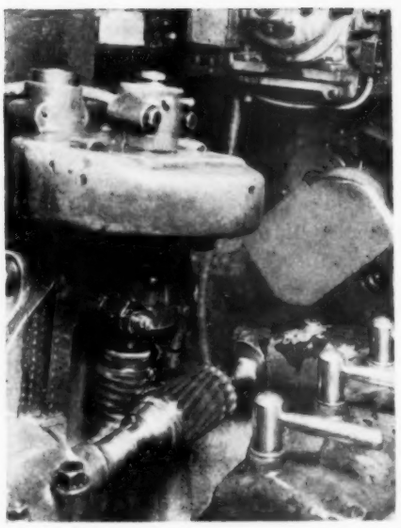
Special hardened steel blocks are inserted in slots provided and carefully welded to become a part of reamer body.

Type 31 Reed Double Three Point Reamer with new Type 31 Reed Roller Bearing Rock Bit Head.

Reamers can be furnished with pipe threading at both ends for fitting to tool joints.

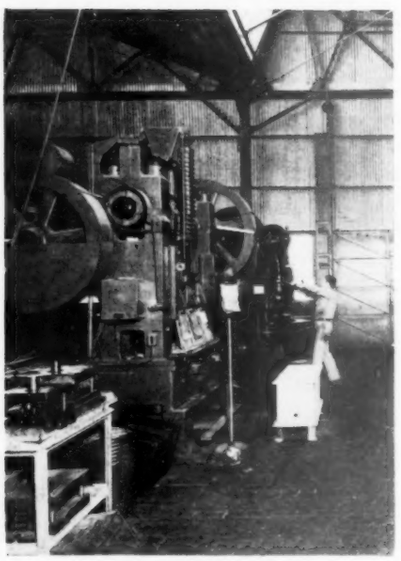
Type 31 Reed Single Three Point Reamer with new Type 31 Reed Roller Bearing Rock Bit Head.

After welding in hardened steel blocks, reamer bodies are ground and dressed so that they not only work well, but look well.



Monster presses stamp out the special washers used on Reed Reamers.

Reed Reamers are equipped with spirally cut reamer cutters to prevent tracking on walls of the hole.



REED ROLLER BIT CO.

HOUSTON NEW YORK CITY OKLAHOMA CITY LOS ANGELES

Mid-Continent and Gulf Coast distributors of

Martin-Decker Products

by the exposition. Demonstration work will be conducted on the outside space during the day. The date for the meeting is March 17.

The Southern California Meter Association will hold its meeting on March 20 after a dinner served in the meeting room. Several papers are in preparation for this and will involve gas measurement, control and regulation. The entire industry is concerned in these subjects and gas is becoming an even greater factor in every branch than heretofore.

Another meeting now being scheduled to be held at the exposition grounds is that of the Independent Petroleum Association of California. This will be in the evening and will probably be arranged for March 21, although the exact date has not yet been set.

The California Natural Gasoline Association will have its regular dinner and session at the Alexandria Hotel on March 19. It will, however, occupy a booth at the exposition and will there have available data and information for the use of all those interested in the natural gasoline industry.

The Production Division of the American Petroleum Institute will hold the spring meeting of the Pacific Coast section in Los Angeles on March 20. One paper to be presented will be on rig foundations and cellar design. Two other papers will be on vapor recovery. One will treat the subject from the theoretical side and the other from the practical.

Kettleman Hills Association Ready to Begin Functioning

Los Angles.—Selection last week of a general manager for the Kettleman North Dome Association, which will supervise the development of nearly one-half of the North Dome at Kettleman Hills, brings the organization a step nearer a decision on offsets to be drilled. The manager, William Reinhardt, will work with the directors in an effort to locate offsets which protect association acreage with minimum activity. The association has completed its permanent organization and is now in a position to make decisions which will affect future development of North Dome.

Failure of certain fee land operators to join the association leaves open a gap which may lead to more development than expected. Some of the best producers on North Dome are located on fee land which has not been included in the pact signed by permitees and operators representing more than 90 per cent of the total acreage. Much of the land nearer the top of the structure than the fee tracts in question will require offsets. Under the present plan of development, the outside row of offsets drilled by the association will not necessarily call for subsequent rows crowding toward the top of the structure, as would have been the case under an individual type of drilling. The endless chain of offsets has been feared most of all, and it was largely this threat that prompted action toward the formation of an association.

At least three fee tracts will require offsets, under the present plan, although modifications may be made. Superior Oil Company's Huffman lease, Associated Oil Company's Whepley tract and Petroleum Securities Company's Felix lease are producing and there is some drainage of the leases next to them.

At least one company has signified its willingness to enter the association, but, since it is offset by a company firmly set against entrance into the organization, has been reluctant to affix its signature. This company recently entered the field through a purchase at a very high price, and is confronted with developing its holdings to protect the investment, as against a desire to throw its acreage into the common pot controlled by the association. The largest producing well in the field immediately offsets the property acquired.

In the gradual shifting around of several operators, a movement which will place some of the companies in a strong position in the event the unit plan fails to function smoothly is seen. If the plan is debated further while certain provisions are discussed, the drilling in of several wells may be possible. The unit plan calls for a practical transfer of all property, and until such a time, those operators who might profit through the completion of offsets are considering drilling in their own behalf.

Standard Oil Company controls at least one-half of the acreage on the North Dome and will be guided largely by the course taken by the other operators. The company is anxious to develop the field slowly and as the market calls for more light oil, but in the event of intensive drilling, the necessary offsets will be drilled. Three wells are being drilled on Section 29-21-17 as offsets to Superior Oil Company's Huffman 1 on the same section. The first completion in this part of the field caused the company to start offsets where no wells would have been drilled under ordinary circumstances.

Union Oil Company is drilling at 6100 feet in Ameranda-King 1, Section 29-21-17, which is also an offset to Superior Oil Company's Huffman 1. This 160-acre lease was obtained for a reported consideration of $8,000,000, of which one-half was supposedly paid in cash and the remainder to be paid in oil. With such a lease at stake, Union Oil Company has naturally been reluctant to enter the Kettleman North Dome Association.

Some talk of a third association, to include those operators not in the main association, has been heard. This probably has been prompted by landowners who for the most part have strongly opposed a unit plan of operation. Actual operators who have acquired the fee leases from the landowners are strongly influenced by the demands of the latter. It happens that in at least two instances the operators themselves are as eager to develop their holdings as are the lessors from whom they took over the leases. It is not an uncommon practice for an operator to blame the landowner for the failure of the former to enter the agreement.

The fee land outside the association already formed, and exclusive of that held by Standard Oil Company of California, hardly exceeds 10 per cent of the total, and may prove to be considerably less. The unit plan probably will proceed with all the land it can get, leaving the remainder to its own resources. The Kettleman North Dome Association will be forced to recognize activity on fee land outside the organization, however, since ignoring a large producing offset will not prevent it from draining undrilled territory.

It will be interesting to follow developments at Kettleman Hills. With Standard Oil Company controlling fully 50 per cent of the North Dome, the newly formed Kettleman North Dome Association, holding roughly 40 per cent, and with about 10 per cent outside of any agreement, development over a future period will be mixed, to say the least.

▼ ▼ THE WEEK'S NEWS ▼ ▼

Geologists Have Busy Session In Prospect at San Antonio

San Antonio, Texas.—Acting as host at the sixteenth annual meeting of the American Association of Petroleum Geologists here March 19, 20 and 21, the San Antonio Geological Society, an official section of the national association, will provide field trips to the Balcones and Mexia fault lines, to Laredo, and into Mexico, aside from furnishing local entertainment. The Gunter Hotel here will be convention headquarters.

Concurrent meetings to be held with the geologists are those of the Society of Economic Paleontologists and Mineralogists and the Society of Petroleum Geophysicists.

While the official program is to be confined to the three days given above, preliminary registration and committee meetings will begin on Monday, March 16, and continue through Tuesday; while on Wednesday, March 18, the preconvention program provides for registration and executive, research and business committee meetings, as well as a Darst Creek-Luling field trip.

The official program on Thursday, March 19, provides for registration, technical sessions in the San Antonio Municipal Auditorium, and nomination of officers.

On Friday ballot boxes will be open all day at the Gunter Hotel, and there will be technical sessions at the hotel, followed by a golf tournament at the San Antonio Country Club, and entertainment and dance at the municipal auditorium.

On Saturday will be held the annual business meeting, new officers will be announced, and further technical sessions will be held at the hotel. Field trips scheduled for that day include those to Laredo, Corpus Christi, Mexico, and Marathon area.

For Sunday, March 22, an Edwards Plateau field trip is planned.

The program of technical material to be presented is very comprehensive, providing for 112 papers, classified under seven major headings.

There will be 15 papers dealing with the Gulf Coastal Plain, touching particularly upon new fields and unusual conditions in older fields.

The second group of papers, numbering 10, will concern West Texas and Eastern New Mexico.

There will be 21 papers in the third group scheduled, covering origin, migration and accumulation of petroleum. A group of 25 papers will cover miscellaneous technical subjects. On areas outside the Gulf Coastal Plain, West Texas and East New Mexico, there will be 17 papers.

The two other groups of material will include 13 papers on geophysics and 11 on paleontology.

The American Association of Petroleum Geologists now has 2550 members. National officers are: president, Sidney Powers, Tulsa, chief geologist for Amerada Petroleum Corporation; past-president, J. Y. Snyder, operator, Shreveport, Louisiana; first vice-president, R. D. Reed, Los Angeles, chief geologist for The Texas Company of California; second vice-president, Marvin Lee, Wichita, Kansas, consulting geologist; and third vice-president, Frederic H. Lahee, Dallas, chief geologist for Sun Oil Company.

Officers of the San Antonio section are: president, D. R. Semmes, consulting geologist; past-president, Charles H. Row, Sun Oil Company; vice-president, H. H. Cooper, consultant; secretary-treasurer, Ed. W. Owen, of L. H. Wentz Oil Division; and member executive committee, J. M. Dawson, Gulf Production Company.

The San Antonio committee on general arrangements is composed of the following chairmen: general committee, D. R. Semmes; technical program, Charles H. Row; finance, H. H. Cooper; reception, L. F. McCollum; entertainment, L. W. MacNaughton; ladies entertainment, J. B. Whisenant; registration, E. H. Finch; trips, J. M. Dawson; transportation, Ward W. Kelley; exhibits, J. D. Hedley; publicity, R. F. Schoolfield; golf, Don Danvers.

Texas Pipe Line Bill Would Fix Tariff on Oil Movement

Austin, Texas.—Hearing before legislative committees is to be held February 26 on proposed legislation before both houses of the Texas legislature which proposes that the Texas Railroad Commission be empowered to fix pipe line tariffs in the state, returns to be limited to 10 per cent of the investment in such lines. A large lobby is in Austin in connection with various items of oil legislation and a spirited hearing is in prospect.

Under the terms of the bill, it will become the duty of the railroad commission to value existing pipe lines, and on future construction actual costs will be determined. From valuations thus secured, rates which will return 10 per cent on actual investment will be fixed, and out of this 10 per cent must come operating expenses and overhead. Rates so fixed may be changed from time to time, following hearings, and lines will be permitted to establish tariffs lower than set by their valuation to meet competition.

Latest Rumor Puts Prairie Into Socony-Vacuum Merger

Tulsa.—Those who deal in rumors are still busy at bringing Prairie Oil & Gas Company into a merger of importance. When the Sinclair-Prairie deal fell through last fall, there was a recession in such rumors for a spell. But others have been revived.

One rumor has the Prairie companies and Tide Water Oil Company ready to be put into one company. Like all others it is still only a rumor. Officials of neither company have commented either way.

Another rumor, less credible than the above, is the addition of Prairie Oil & Gas Company and Prairie Pipe Line Company to General Petroleum Corporation, the holding company, which is to be formed when, if and as the United States Supreme Court approves the merger of Standard Oil Company of New York and Vacuum Oil Company.

Meanwhile Prairie Oil & Gas Company has taken initiative on its own account by acquiring Long Oil Company, a selling organization with headquarters at Manhattan, Kansas. This deal is still involved in litigation, which seems certain to be removed shortly. It is likely, also, that Prairie Oil & Gas Company will acquire Keeton Oil Company, another Kansas distributing organization with headquarters at Salina.

...Uniformity

Axelson Sucker Rods have won the distinction of giving uniformly satisfactory service, free from rod fatigue or pin fracture. This reputation has been built because all rods in an Axelson string are identical in every fractional portion of their area. Because they are alike they resist at every point the stresses and strains of pumping service. Their uniformity is the result of thorough and scientific laboratory control. Tested for hardness with Brinell instruments... for ultimate strength, yield point, percentage of elongation and reduction of area by Olsen tensile testing machine, laboratory record has only started. Olsen-Izod tested to ascertain the ability of the rod material to withstand shock or impact stresses, Tinius-Olsen fatigue tested for endurance limit, specimen bar after specimen bar from each heat is studied and the results recorded.

Physical tests are completed by subjecting rod specimens to hot acid immersion, in this way determining any seams or pipes in the material. Chemical analysis determines the correct proportions of ingredients which combine in forming a high-grade steel. To the physical and chemical analysis of material is added a minute inspection of forgings, threads, rod shoulders, in fact thirty-one inspections are made on various portions of the rod before it is ready for field service.

Write for full information on the Axelson Sucker Rod.

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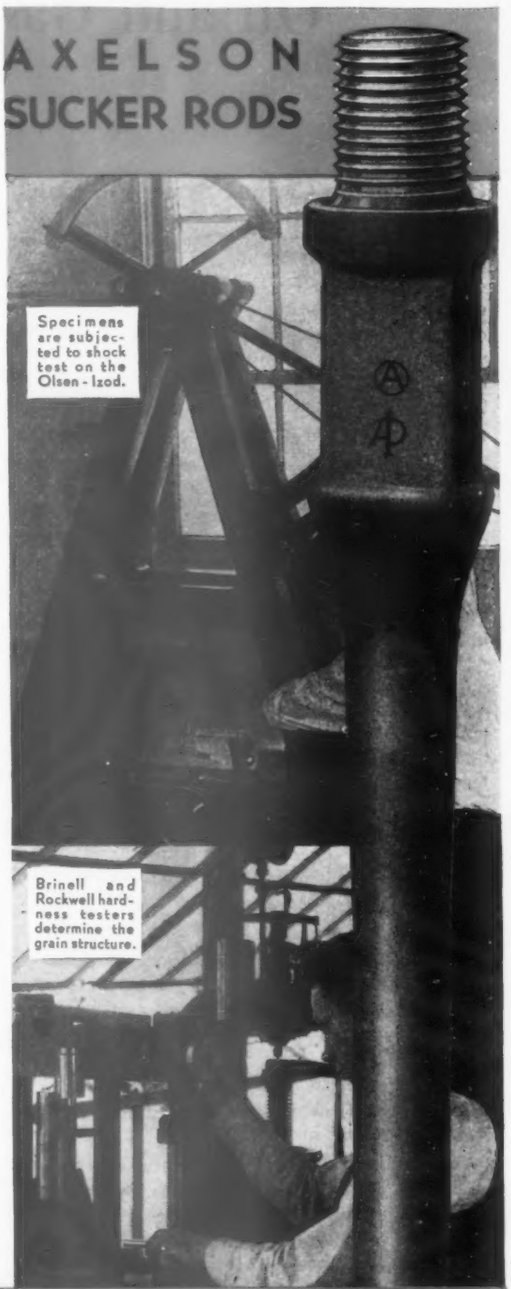
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Specimens are subjected to shock test on the Olsen-Izod.
Brinell and Rockwell hardness testers determine the grain structure.

STRAIGHT FACTS

THE FOURTH OF A SERIES, AND THE SECOND DEVOTED TO SUCKER RODS

Oil and Gas Pipe Line Activities

▼ ▼ ▼

Oil Industry Cannot Serve Public Without Pipe Lines

New York.—Nothing should be done which will retard or prevent the use of pipe lines, for the oil industry cannot continue discharging its obligations to the American people without them, in the opinion of Frank Phillips, president of the Phillips Petroleum Company, Bartlesville, Oklahoma, and member of the American Petroleum Institute's pipe line committee.

In a statement opposing the proposal of railroad executives to subject pipe line common carriers to the same restrictions as the railroads as regards transportation of commodities in which they directly are interested, Mr. Phillips declared a better course of action would be for the railroads to seek relief from their own burdens and restrictions rather than the enactment of laws designed to kill off competition.

Mr. Phillips' statement follows:

"Railway executives, in their declaration of policy announced last November as regards to pipe line transportation, stated that pipe line common carriers should be subjected to the same restrictions as to the transportation of commodities in which they are interested directly, or indirectly, as the railroads now are. Obviously the purpose of the railway executives in announcing this policy is to restrict the transportation of petroleum and its products via pipe line or compel the movement of this class of traffic via rail.

"Briefly stated, the railroads desire that pipe lines be required to obtain from the Interstate Commerce Commission a certificate of necessity and convenience for the construction of a pipe line, that the so-called Commodities Clause, Paragraph 8, Section 1, of the Interstate Commerce Act be applied to pipe lines, and that pipe lines be subjected to the Recapture Clause of the Interstate Commerce Act as provided in Section 15-A.

"Section 1, Paragraph 18, of the act sets forth that no carrier by railroad, subject to the act, shall undertake the extension of its line of railroads, or the construction of a new line of railroad, unless and until there shall first be obtained from the commission a certificate that the present and future public convenience and necessity require, or will require, the construction or operation of such additional and extended line of railroad. It is obvious that, having provided in the act, Section 15-A, the commission should prescribe rates which would yield railroads a fair return on their investment, congress should also legislate against the unnecessary and uneconomical construction of railroads which would increase the railroad investment and, therefore, add to the transportation burden of the people.

"This clause of the act has actually operated to preclude the building of new lines of railroad into territory already served by existing lines, when construction of a new line would have provided communities with improved rail service at lower freight rates. It has been the subject of much criticism and several attempts have been made to repeal that portion of the act. To apply this provision to pipe lines would result in irreparable loss to the oil industry for the reason that the oil fields of great magnitude are sometimes developed almost overnight, making it necessary for immediate construction of pipe lines to transport the oil to refineries and points where adequate storage is provided. It requires months, and sometimes years, to conclude investigations in connection with an application for certificate of necessity and convenience. This slow method of procedure would oftentimes render oil fields practically valueless.

"The so-called Commodities Clause of the Interstate Commerce Act, while it prohibits railroads from transporting any commodities in which they have direct interest, other than timber, or the transportation of material and supplies used in the construction and maintenance of their lines, does not prevent industries from owning railroads, and such industries from moving their products over their products over their own roads. It is a well known fact that many industries of the country do own or operate railroads. Pipe lines do not own or control the oil which they transport. Therefore, in so far as the Commodities Clause is concerned, pipe lines and railroads are today on a parity.

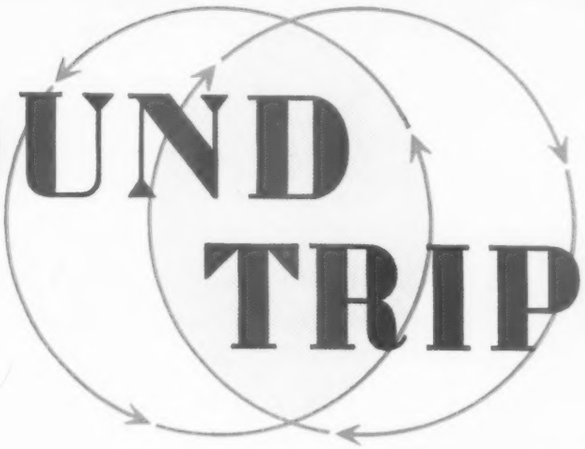
"Pipe lines cannot be separated from the oil industry and continue to economically and efficiently carry out their transportation function. Pipe lines, unlike the railroads, are limited to transportation of one commodity. When oil fields are depleted they cannot, like railroads that are primarily constructed for the transportation of lumber, coal and other commodities, engage in other transportation, as the physical properties will not permit of the movement of any other commodity."

Prairie Surveying Route To New East Texas Fields

Mexia, Texas.—Surveying crews of Pure Oil Pipe Line Company of Texas, fully owned subsidiary of Prairie Pipe Line Company, are now at work in picking a tentative route for a pipe line from Teague station, located southeast of the Mexia field, to the Joiner field, Rusk County. The above company has made no definite plans in regard to the extension of its trunk line system into the new East Texas areas, and the preliminary survey of a route was authorized as a preparedness step in the event later developments warrant such an extension being built. Chas. Fitzgerald is superintendent of Texas operations for the above company with headquarters at Dallas.

Pure Oil Pipe Line Company of Texas has a looped eight-inch trunk line that extends from the Mexia district to tidewater terminals at Smiths Bluff, near Beaumont, and is reported to have about 25,000 barrels of available room on southbound shipments, thus affording an attractive common carrier proposition for East Texas operators. Routing of East Texas crude via the above system from Mexia to the Middle West and East is also possible, as Prairie Pipe Line Company's Mid-Continent trunk line system ties in at Bluitt station, near Mexia.

ROUND TRIPS..



at your expense

. . . reduced to a MINIMUM!

Offhand, you'd think it didn't make any difference to you how the cutters of an outside cutting tool are fed into the pipe. After all, you pay so-much per cut and it's up to the operator of the tool to get your drill pipe out of the hole.

But, don't forget the cost of round trips!

You pay for those, too, and the more round trips made the higher the total cost of your cutting job. Breaking cutters before completing a cut boosts your total expense on an outside cutting job. Every set of cutters broken means an extra round trip—*at your expense*. Round trips cost between $25.00 and $100.00.

When you call for a J. S. Abercrombie Outside Cutting Tool you actually reduce round trips, *at your expense*, to a minimum. Cutters of this tool remain flush with inside of cutter body while going in the hole. No risk of breakage there. When the tool is set, cutters are fed into the pipe by patented and exclusive automatic screw feed . . . the same as a lathe cutting tool is fed into a piece of steel. The feed is slow, even and smooth and an accurate track is cut. When cut is completed, the screw feed returns cutters to their original position. Cutter breakage is almost unknown.

Hold your outside cutting expense on bottom by calling for J. S. Abercrombie Red Ball Cutting Service on your next job!

RED BALL CUTTING SERVICE

J. S. Abercrombie Co.

21ST FLOOR GULF BLDG.
HOUSTON - TEXAS

for
INSIDE Cutting
OUTSIDE Cutting
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Home Office.....Fairfax 5317
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Arch Owens.....Lehigh 7586
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C. M. & R. H. Abercrombie
Lehigh 6902
J. S. Abercrombie.....Lehigh 7459

LAKE CHARLES

Ford de Cordova..... 'Phone 584

New Electric Process Used In Welding Long Gulf Line

A long distance pipe line from Oklahoma to Gulf Refining Company plants in Ohio and Western Pennsylvania, has recently been completed. This line, which originates in Perryman, Oklahoma, was constructed by Gulf Pipe Line Company of Pennsylvania. It consists of a main line 732 miles long constructed of 10-inch pipe, and a branch line of eight-inch pipe, 51 miles long.

The main line runs from Oklahoma to Spencerville, Ohio, thence to Toledo and Pittsburgh, by way of the old Buckeye Pipe Line Company's line. The branch line is taken from the main line at Dublin, Indiana, and runs to Cincinnati.

Construction of this line involved practically all the latest developments in efficient pipe line construction, including arc welded joints in the firing line. Seamless tubing and lap-welded pipe, equipped with double bell and chill band joints, were used. The pipe lengths averaged approximately 40 feet and weighed 40 pounds per lineal foot. Each pipe length is belled at both ends and the ends are beveled so that in arc welding the joint the weld penetrates through to the chill band, as shown in Figure 1, making an exceptionally strong and rigid joint.

"Fleetweld" process was adopted for use on the new line. This process utilizes the shielded arc, a recent development of the Lincoln Electric Company.

As sections of this pipe line were completed they were tested for tightness. The section from Spencerville, Ohio, to Dublin, Indiana, distance of about 78 miles, was tested with air at 130 pounds per square inch, and only one small pin hole was found. This hole was repaired and the pressure was kept on the line for four consecutive days. At the end of the four days the pressure had dropped only one-half pound. On another section of the line, Dublin, Indiana, to Edgewood, a distance of about 193 miles, the line was tested to a pressure of 100 pounds, and no leaks were found.

When completed this pipe line will be served by 14 pumping stations each equipped with oil engine-driven reciprocating pumps. The line will have a working pressure of approximately 700 pounds per square inch, and a capacity of 35 to 40 thousand barrels per day.

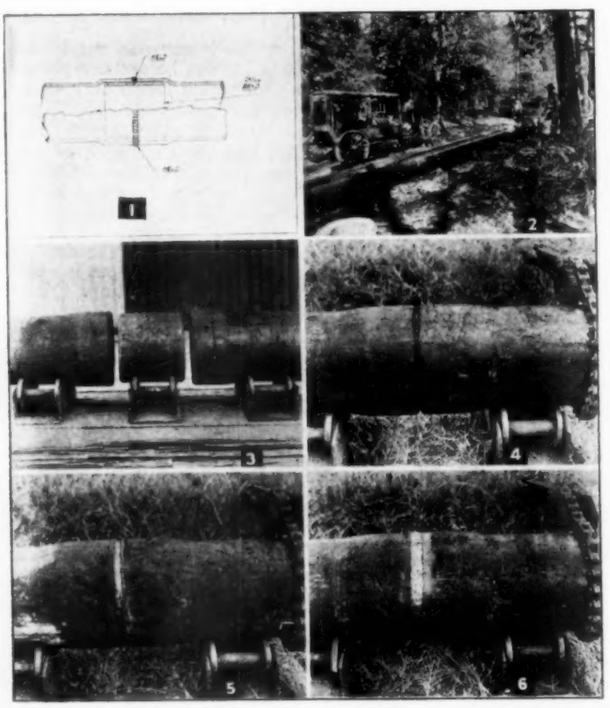


Figure 1—The weld fuses the pipe section together and to the chill band, making the entire line one integral steel unit
Figure 2—Showing an operator making a firing line weld
Figure 3—Showing the double bell and chill band joint before being completed
Figure 4—The joint complete ready for arc welding
Figure 5—The burning-in bead in place
Figure 6—The completed joint just after the finished bead was completed

Humble Stops Construction On Line to East Texas Area

Tyler, Texas.—Halting of construction work on Humble Pipe Line Company's eight-inch line to the discovery well on the Crim farm in the Kilgore field February 19 when the project was almost completed has given rise to the belief that Humble Oil & Refining Company is still hopeful of obtaining the support of operators on a proration program. Should the company operate the line a crude price posting would necessarily follow, and it is believed that the company desires to withhold its price schedule to influence proration. It is understood that this company is agreeable to buying oil and paying a better price than now available in any of the nearby fields if some assurance can be had for restrictions on drilling and production. Production from Humble Oil & Refining Company's Crim 1, which was purchased from Ed. W. Bateman et al, is being stored on the lease, or used for fuel in drilling six other tests on the same lease.

Approve A. P. I. Standard Specifications on Tanks

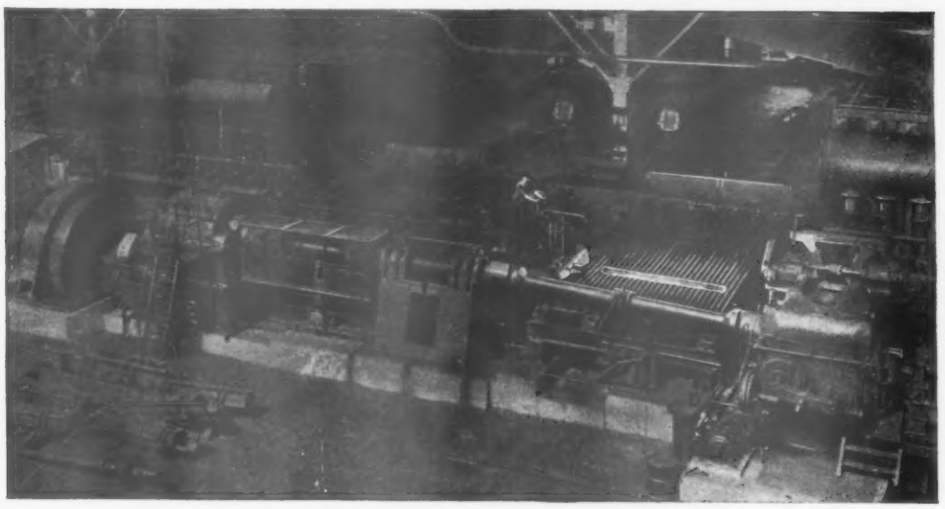
Analysis of letter ballots submitted in response to a request for opinions on the proposal to alter specifications covering steel tanks, American Petroleum Institute Standards No. 12-B, by revising manhole designs and changing to "tentative" paragraphs applying to welded bottoms have indicated unanimous approval and the changes now are effective. The revised information will be transmitted to all holders of A. P. I. Standards 12-A, National Chairman G. O. Wilson, Standard Oil Company of California, San Francisco, has advised members of the division of production special committee on the standardization of steel tanks for oil storage.

Mr. Wilson added that, with regard to bolted tanks, there was substantial unanimity on proposals to change specifications to show a finished stave instead of the present flat plate layout, to include provision for vertical lap joints between staves in the layout of chime bolt holes and definitely to fix the fillet radius to which chimes are bent.

Mr. Wilson said there were differences of opinion as to specific methods of providing for some items, and approximately equal division on the proposal to secure better bolt clearances by increasing the bolt diameter circle. In order to avoid the necessity of calling a special meeting, therefore, committee members were asked to consider a compromise proposal made by national officers and to indicate their opinions on a ballot to be returned to W. C. Shutts, Humble Oil & Refining Company, Houston, Texas.

The compromise proposal follows:

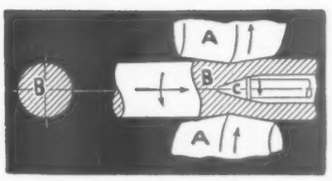
"Retain the present bolt circles and secure better clearance for nuts by reducing the minimum edge distance to 5/8-inch and increasing the height of all staves by 1/2-inch. Use 5/16-inch fillet radius for all staves; allow option of tapered or double crimped method of allowing for vertical lap, making the female end of the stave the same by either method to insure interchangeability."



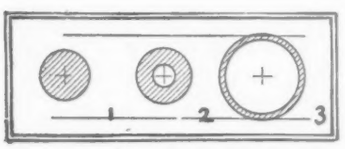
Pictured above is the first piercer in the J & L No. 2 Seamless Tube Mill at the Aliquippa, Pa., Works. One of the solid round billets, white hot, from which J & L Seamless Pipe is made, may be seen rolling down the skids, to enter the machinery in the right foreground, to be converted into tubular form. Compare the size of this powerful machinery with the operator, at his controls in the center of the picture.

Right from the Start

J & L Strives for Seamless of Uniform Wall Thickness

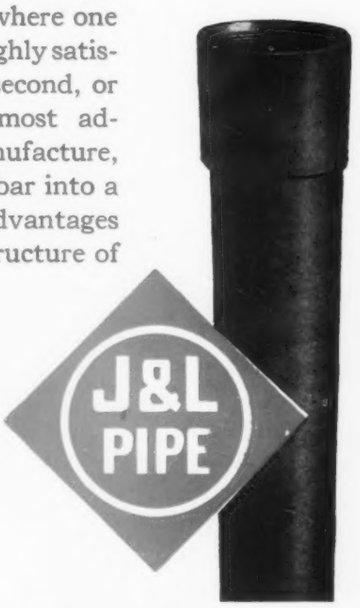


Sketch shows in cut-a-way view, the operation of the first piercer. The rolls, "A," carry the solid round billet, "B," over the piercing point, "C."



Development of cross section in the manufacture of J & L Seamless: 1. Before piercing; 2. After first piercing; 3. After second piercing.

IN producing all sizes of Seamless Pipe, except the smaller tubing where one piercing operation is thoroughly satisfactory, J & L employs also a second, or expanding, piercer. By this most advanced method of seamless manufacture, J & L converts the solid round bar into a tube gradually and easily. Advantages are, absence of strains in the structure of the steel and production of a tube of relatively uniform wall thickness right at the start. Together, these results make for uniform strength and dependability in the finished J & L Seamless when it goes into service in the field.



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AMERICAN IRON AND STEEL WORKS

J&L STEEL

Manufacturers of Seamless and Welded Casing, Tubing, Drill Pipe and Line Pipe, and Welded Steam, Gas and Water Pipe in both Black and Galvanized.

Also makers of Bars, Shapes and Plates, Reinforcing Bars, Cold Finished Steel, Junior Beams, Steel Piling, Fabricated Structural Work, Steel Barges, Wire Products and Tin Mill Products.

JONES & LAUGHLIN BUILDING, PITTSBURGH, PENNSYLVANIA

Personal Mention—Men You Know

▼ ▼ ▼

C. K. Stillwagon, field representative for Mission Sales Company, Houston, has recently been transferred from Hobbs, New Mexico, to Tyler, Texas, to cover the East Texas fields, and has established his district headquarters at 316 West Ferguson Street.

J. M. McNeal, European sales manager of Landis Machine Company, Waynesboro, Pennsylvania, sailed February 14 for England after a three weeks' visit to the home office. He makes headquarters at Birmingham, England, but supervises the sale of Landis threading equipment both in Great Britain and Continental Europe. He has associated with him D. F. McLaughlin, also from Waynesboro.

M. H. Steig, who was geologist for Mexican Gulf Oil Company at Tampico, Mexico, has been with the Houston Oil Company since June 1930. He has been located in Beeville, Texas, until recently, when he was transferred to the Houston office, where he has charge of the subsurface department.

J. T. Clark, district foreman for Magnolia Pipe Line Company in West Texas, has been transferred from Midland to Longview to occupy same position for the company in the East Texas district, which has been assigned to territory already handled by C. R. Swank, assistant superintendent, with headquarters at Shreveport.

J. G. Littlejohn, field superintendent for Snowden & McSweeney Company in the Artesia, New Mexico, district, has been transferred to Longview, Texas, in advance of the company's proposed development program in East Texas. Chas. Moon is general superintendent of production for the company in Texas and New Mexico with headquarters at Fort Worth.

A. F. Corwin, director in charge of production for Standard Oil Company of New York, visited the Dallas general offices of Magnolia Petroleum Company last week, and also made an inspection tour of the East Texas holdings of the latter subsidiary, accompanied by M. J. McLaughlin, acting manager of production for Magnolia Petroleum Company.

Fred H. Hayes has been appointed manager of the pipe line pump department of Goulds Pumps, Inc., Seneca Falls, New York.

Charles G. Cooper, associated for the past three years with The Cooper-Bessemer Corporation at its Mt. Vernon, Ohio, plant, has been transferred to the New York City office, where he will act as sales representative for the several divisions of the corporation. The New York office will continue under the management of C. M. Reagle, vice president.

C. B. TIBBITTS

C. B. Tibbitts, president and manager of the Los Angeles Steel Casting Company, Los Angeles, has been appointed chairman of the foundry division of the Oil Equipment and Engineering Exposition.

Travis Kerr, who has been in charge of sales in California for Lucey Products Corporation, has returned to the Mid-Continent territory, with headquarters at Ada, Oklahoma.

W. J. Sherman, assistant to the manager, producing division, The Texas Company, Houston, underwent an emergency operation for appendicitis February 17.

Sidney G. Corson has been added to the force of General Supply Company, 317 M. & M. Building, Houston, in the capacity of specialty salesman for drilling and production equipment. During the past few years he has devoted most of his time in South American fields as material man for some of the major oil companies' South American subsidiaries.

Hudnall & Pirtle are instituting a geological information service at Tyler, Texas, in which they will cover an area of approximately 300,000 acres lying in Rusk, eastern Smith, and southern Gregg Counties, embracing the Joiner, Bateman and Moncrief-Farrel areas in East Texas.

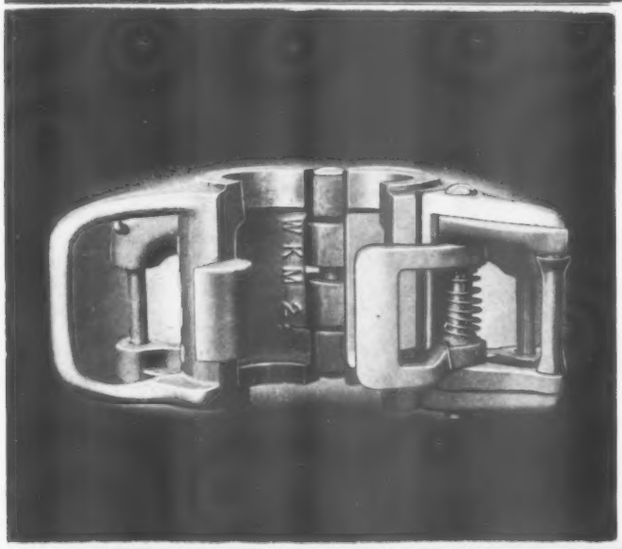
The personnel of the organization will consist of three geologists, J. S. Hudnall, Chester B. Whorton of the firm of Turner & Whorton, and R. C. Lane, all of whom have had more than five years experience in the field. There will also be two instrument men, a draftsman, and a log plotter.

The firm proposes to complete a series of four maps: a subsurface structural map covering the entire area, a sand thickness map, a production map showing initial production and other production data, and a surface structural map showing detail around the active producing areas and eventually to cover the entire area. The first named map is to be completed within six weeks, and the others are to follow at regular intervals, the last to be finished within about 4½ months.

A. C. Galbraith has been elected assistant vice-president of Union Oil Company of California, a newly formed office, and in addition will become managing director of Atlantic Union Oil Company of Australasia.

Dr. F. B. Plummer of the University of Texas was principal speaker at the semi-monthly technical meeting of the Tulsa Geological Society, Monday evening, February 16. Dr. Plummer spoke on the chemistry and temperatures of Woodbine sand waters, based on the results of his studies in connection with American Petroleum Institute's project Number 25. Among the important discoveries of the investigation was establishment of the close relationship between lines of equal salinity, isothermal lines and the regional structure. It was also pointed out that chloride concentration shows a decided increase in the vicinity of faults and structures. These facts should be decidedly helpful to geologists working in the new East Texas Area. After the technical session, a short business meeting was held for members of the American Association of Petroleum Geologists. R. S. Knappen and W. R. Hamilton were chosen as representatives for the Eastern Ok-

The W-K-M Full-Automatic Elevator



Featuring—

Full-automatic locking and releasing

Injury-proof, sure-fire latch

Big, Convenient handles

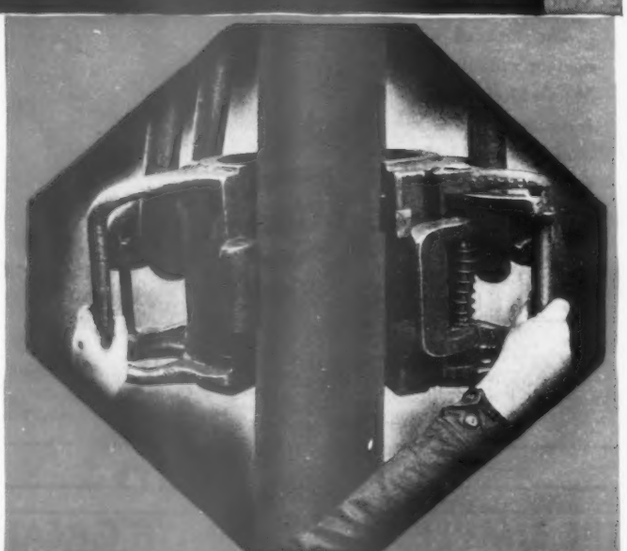
Oversize alloy steel hinge-pins and latch-pins

Extra heavy latch-spring, with great tension

NEW SPEED - NEW CONVENIENCE

The immediate acceptance and popularity of W-K-M Full-Automatic Elevators can be attributed to: (1) The elevators are *fully automatic* both in opening and in closing; (2) Big, convenient handles provide ample protection against finger-mashing; (3) Easy, quick operation adds to speed of derrick-man and his safety; (4) Latch-springs are extra heavy, making them wear longer than others; (5) Elevators always hang true in the bails because of well-rounded ears; (6) Retaining pins are countersunk in ears to prevent their accidental loss.

Hundreds have requested our Pamphlet No. 605 telling the full story! Fill in the coupon today and learn how you can speed up the work of your derrick crews.



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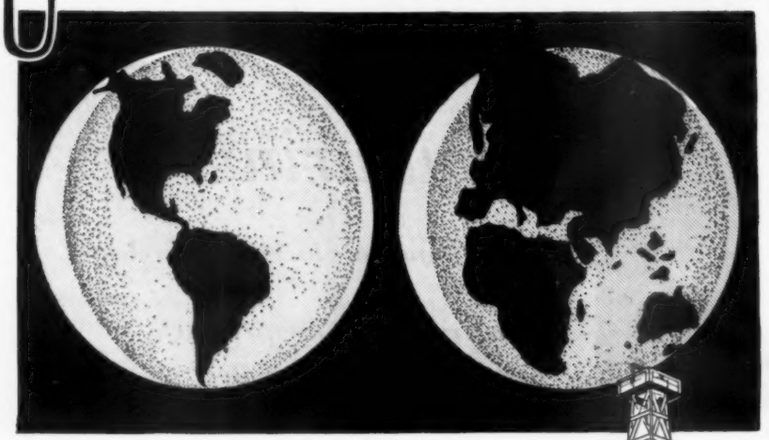

The Martin-Decker Weight Indicator was the first successful Weight Indicator for drilling wells.

That it was a complete success is evidenced by its

UNIVERSAL ACCEPTANCE

The first of a series of advertisements dealing with the universal acceptance of the Martin-Decker Automatic recording Weight Indicator. Wherever rotary drilling is being done you will find a great majority of operators using the dependable weight indicator.

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ACME B·&R·

One of the 148 types of Drilling and Fishing Tools made by
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at Parkersburg W·Va·
ESTABLISHED *in* 1900
Distributors and Dealers in all active fields

lahoma district. They will take office immediately after the coming convention at San Antonio and serve for two years thereafter.

The Drumright Chapter, A. P. I. Division of Production, more than upheld its record for interesting and instructive programs at the regular monthly meeting, held Tuesday evening, February 17, at the Drumright Community Hall. M. M. and Harry Kinley, noted fighters of oil field fires, related some of their experiences and presented methods of attack with motion pictures of two of the largest fires that they have conquered. H. G. Texter, sales engineer for Spang Chalfant Company, presented four reels of talking pictures in connection with the manufacture of steel products by his company.

John P. Mills, independent producer of California, will develop wildcat lands in northern New Mexico during the year, having recently entered the state through the New Mexico Development Company.

William Reinhardt, vice-president and manager of production for Shell Oil Company, has been elected manager of the Kettleman North Dome Association. The position is a very important one and will necessitate his resignation from the former position.

C. L. Gilmore, well known attorney of Sacramento, has been endorsed for Director of Natural Resources of California by several organizations, among which are the Independent Petroleum Association.

J. A. Bermingham, vice-president of The Texas Company of California and manager of the producing division, has returned to Los Angeles, following an extended trip through the East.

C. D. Meals, formerly chief engineer of the American Cable Company and wire rope engineer of the Roebling Company has taken charge, as president and general manager of the newly formed Wire Rope Corporation of America, Inc. of New Haven, Connecticut. He will have identified with him A. F. Haury, formerly associated with the American Cable Company and American Steel & Wire Company in an engineering capacity.

C. A. Auer, who established the C. L. and W. W. Auer Company, leather specialties company of Cory, Pennsylvania, in 1887, died at his home in Cory early in February at the age of 74. He retired from his company in 1927, leaving the management to his two sons, who have operated the business since.

C. A. McClelland of Reed Roller Bit Company, Houston, has returned from a trip around the world in the interest of his company's foreign business.

eadership

A Fable About Leadershi

A lion met a tiger
As they drank beside the pool.
Said the tiger to the lion,
"You're roaring like a fool."

"That's not foolish,"
said the lion, with
a twinkle in his eyes.
"They call me king of all
the beasts, because I advertise."

A rabbit heard them talking,
And ran home like a streak.
He thought he'd try the lion's plan
But his roar was a squeak.

A fox came to investigate,
had luncheon in the woods
So when you advertse, my friend,
Be sure you've got the goods.

Well do we realize the obligations, price, and penalties of leadership, but we feel we are well able to deliver the goods—AND DO SO.

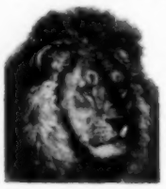
B.S.& B. Perfection STEEL TANKS

B. S. & B. leads in flow and storage tanks, and though we manufacture welded tanks, we have concentrated on bolted tanks, especially of a certain model—the B. S. & B. PERFECTION Vapor Pressure Tank.

These tanks are more than mere shells, and prove to be "The Watch Dog of the Crude." Each is equipped with the B. S. & B. Thief Hole Pressure Vacuum Valve, which protects the tank, as the tank protects the crude. On these tanks the reputation of B. S. & B. has been built!

We also manufacture A.P.I. tanks. B. S. & B. A.P.I. Bolted Steel Tanks conform to A.P.I. dimensional standards and to the exacting standards of B. S. & B. manufacture, and carry the official A.P.I. monogram.

B.S.& B. WOOD TANKS



B. S. & B. have also been manufacturing wood tanks of redwood and cypress for many years, and when there came a need for it, we promptly accepted the leadership, and have been making the B. S. & B. Vapor Pressure Tanks in wood.

These tanks are made especially for use in Southwest Texas and the Panhandle districts where Hydrogen Sulphide Gas is found in sour crude, and which causes a grave corrosion problem. These tanks, made of redwood, with inside metal parts insulated with wood, are also equipped with the B. S. & B. Thief Hole Pressure Vacuum Valve. Thus *"the tank that defies corrosion."*

We also manufacture a B. S. & B. Gas-Tight wood tank for use in the storage of heavy gravity oil. This tank is built to hold one-half ounce pressure and one-half ounce vacuum.

B.S.& B. Safety STEEL WALK STAIR WAYS

And when there came a demand for Walkways and Stairways that would not rot or burn, B. S. & B. fabricated them of steel. These Walkways and Stairways are portable and practical, strong and adjustable. Only five different kinds of material are used, and *they are as simple to erect as building toys.* The first cost is reasonably low, and the equipment will last indefinitely.

Also B. S. & B.'s Refinery & Gasoline Plant Division

Recently a new division of B. S. & B. was created to design and superintend construction of natural gasoline plants and refinery equipment. *Everything from plan to plant!*

B.S.&B. Service *"On the Dot-On the Spot"*

ANOTHER thing about B. S. & B. that cannot be beat, we feel, is our service. From the order to the lease in a few hours time is not only a promise, but a reality. Fifty branches, well distributed throughout the Mid-Continent and Rocky Mountain Fields, and extending to Okotoks, Canada and Maracaibo, South America (Sales Representation only) with ample stocks, and our own trained men instantly available, make it possible for quick and thorough service in setting or resetting.

Query us regarding our steel and wood tanks, or our Safety Steel Walkways, and let us prove their advantages, and the value of the B. S. & B. Service. Request a representative or literature. Address Dept. X-13.

PRODUCTS B S&B SERVICE

Black Sivalls & Bryson INC.
BARTLESVILLE - OKLAHOMA

Our Watchword QUICK SERVICE

B.S & B. 1931.

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

▼ ▼ ▼

North Belridge Temblor Sand Production Not Widespread

Bakersfield, Calif.—The Temblor formation in the North Belridge field will not be productive over a wide area, if developments just outside the producing limits of the shallow zone are a reliable barometer. It may not be fair to the field to judge the probable producing trend from the two wells which have reached what is supposedly the Temblor, but both tests indicate a narrow producing strip in the deep zone. Richfield Oil Company's Belridge 1 is showing little promise with the latest efforts being directed at the 5800-6000-foot level. This well was originally reported to have found the Temblor at about 5000 feet, but the formation proved to be another body. The objective formation probably was found around 5600 feet. Subsequently tests were made at various depths down to 6639 feet, but water always made its appearance. All told, the oil sand cored below 5600 feet did not total more than 200 feet, and this was so laminated that questionable streaks were cut at various levels. The last casing was a string of 6⅝-inch at 6255 feet. Ohio Oil Company's Bloemer 1, section 36-27-20, apparently picked up the Temblor at 5680 feet, but tests with a formation tester showed water. The well will be deepened from 5725 feet. Several wells are approaching the Temblor and the probable trend of production will be known within a few weeks. Standard Oil Company has shut down McPhail 1 at 4528 feet but is drilling ahead at 4600 feet in McPhail 2. Both are indirect offsets to the discovery well. Belridge Oil Company has five wells under way in the field.

Hermosa Area Possibilities Not Attractive at This Time

Los Angeles.—Several small operators have started near Hermosa Beach, the district being nothing more than an extension or continuation of the Torrance field. The first well to get oil during the most recent development was California Ventura Oil Company's Hermosa 2, which pumped oil, mud and water for a time and later yielded about 25 barrels of fairly clean oil. Reports that a new field has been found is erroneous, since oil was found on a line which would have led to present development several years ago. Operators feared that production obtained would not prove profitable and did not wish to push the western limits of the field farther. The district is attractive to the small operator, since he stands a fair chance of getting a small producer below 3000 feet. Under present conditions, however, development is not justified.

Santa Barbara, Calif.—Re-enforcement of the plug in Bolsa Chica Oil Corporation's Augur 191-1, an ocean wildcat off Coal Oil Point, has failed to materially change the status of the well, swabbing after the addition of 10 sacks of cement having shown water and oil as before. The hole was cleaned out to the top of the second plug and there is evidence that the formation above the maximum level under test contains water. The hole was originally drilled to 4191 feet and plugged back to 4155 feet before a production test was made. The well made its best showing during the first test, subsequent changes having added to the difficulties. The top of the Vaqueros zone between 4020 feet and 4075 feet was largely oil sand and probably would have shown little water, but the desire to include the maximum thickness may have caused the failure.

California Curtailed Oil 575,000 Barrels February 1

Los Angeles.—Total oil curtailed and shut in in California on February 1 stood at 575,000 barrels, according to a survey completed by a leading producing company. Of this amount, 277,000 barrels is shut in and 298,000 barrels curtailed. The shut in total is represented by 220,000 barrels of light oil and 57,000 barrels of heavy oil, while the curtailed total is composed of 260,000 barrels of light oil and 38,000 barrels of heavy oil. Standard Oil Company's shut in and curtailed production stands at 86,000 barrels, of which 77,000 barrels is curtailed and 9000 barrels shut in; Shell Oil Company's total is 68,000 barrels, of which 41,000 barrels is shut in and 27,000 barrels curtailed; Union Oil Company ranks third with a total of 51,000 barrels, of which 41,000 barrels is shut in and 10,000 barrels curtailed; Asso-

California Oil Field Data, January, 1931

	No. Leases	Wells: Idle	Wells: Producing	Wells: Total	Field Potential B/D	Av. well Potential B/D	Feb. Allotment B/D
Belridge	19	68	227	295	7,200	24.4	4,000
Brea-Olinda	19	56	106	162	23,671	146.1	10,590
Capitan	2	1	7	8	1,200	150.0	20
Coalinga	115	749	775	1,524	33,500	22.0	8,900
Dominguez	9	39	52	91	15,220	167.3	9,900
East Coyote	19	30	80	110	3,744	34.0	1,600
Elk Hills	26	61	281	342	29,650	86.7	13,500
Elwood	11	11	42	53	106,000	2,000.0	29,000
Fruitvale	44	17	14	31	9,170	296.0	2,500
Huntington Beach	250	317	375	692	41,725	60.3	20,500
Inglewood	15	34	210	244	22,330	91.5	16,000
Kern Front	35	168	150	318	20,250	63.7	9,240
Kern River	130	1,390	748	2,138	10,893	5.1	2,750
Kettleman Hills	27	24	8	32	67,600	2,112.5	22,500
Lawndale	5	2	7	9	350	38.9	300
Los Angeles	52	8	319	327	1,400	4.3	1,500
Long Beach	665	339	787	1,126	194,572	172.8	89,000
Lost Hills	23	351	43	394	6,500	16.5	320
Maricopa Flat	21	19	42	61	12,000	196.7	5,250
McKittrick	45	58	271	329	4,580	13.9	3,600
Midway-Sunset	320	1,432	1,845	3,277	92,111	28.1	50,000
Montebello	26	20	182	202	9,150	45.3	7,200
Mount Poso	21	50	67	117	22,575	193.0	8,500
Newport	..	..	..	..	....	....	250
Playa del Rey	120	30	150	180	48,837	271.3	22,300
Potrero	10	1	15	16	1,800	112.5	850
Richfield	77	141	159	300	14,874	49.6	6,800
Rincon	10	7	31	38	3,000	78.9	1,250
Rosecrans	47	30	87	117	7,466	63.8	3,750
Round Mountain	12	38	..	38	13,194	347.2	3,500
Santa Barbara	13	1	3	4	515	128.8	335
Santa Fe Springs	107	242	440	682	137,500	201.6	61,675
Santa Maria	40	286	160	446	12,000	26.9	2,500
Seal Beach	54	65	111	176	33,521	190.5	15,300
Summerland	13	24	87	111	250	2.2	250
Torrance	108	233	431	664	12,528	18.9	5,760
Ventura Avenue	18	101	132	233	96,751	415.2	44,500
Ventura-Newhall	85	229	503	732	6,200	8.5	3,900
Watsonville	1	2	6	8	60	7.5	60
West Coyote	2	30	101	131	11,530	88.0	8,500
Wheeler Ridge	3	..	36	36	590	16.4	600
Whittier	21	10	172	182	1,450	8.0	1,250
Total	2,640	6,714	9,262	15,976	1,137,457	71.20	500,000

ciated Oil Company is a close fourth with a total of 50,000 barrels, of which 26,000 barrels is shut in and 14,000 barrels curtailed; General Petroleum Corporation's total stands at 40,000 barrels, of which 38,000 barrels is shut in and 2000 barrels curtailed; The Texas Company's total is 21,000 barrels, of which 2500 barrels is shut in and 18,500 barrels curtailed; Richfield Oil Company's total is 19,000 barrels, of which 14,000 barrels is shut in and 5000 barrels curtailed. All other companies have a total of 240,000 barrels, of which 23,000 barrels is shut in and 217,000 barrels curtailed. Shut in and curtailed production represents 50.5 per cent of the state's potential, according to the report.

Playa del Rey Operations Becoming More Substantial

Los Angeles.—Efforts of many small operators to "hang on" until they can complete their wells, and a more business-like plan of the few large operators to continue the development of their holdings, form a good lesson in contrasts at Playa del Rey, where the townlot part of the drilling boom has subsided. The large tracts are controlled by Union Oil Company and Ohio Oil Company and will be drilled on a conservative basis. A search of the records for the addresses of several small operators showed that many of these over-night oil men failed even to leave a forwarding address. In one instance, the course of transfer took a jig-jag course from the original landowner to a party who had no intention of completing the well. The machinery had been torn out and the woman who first granted the lease announced that she had never received any money for the use of the lot. The small tract was only 30 by 90 feet and too small to allow the installation of boilers. To get around this shortage, steam was to be furnished from boilers located on another lot. These boilers were never installed and steam was not obtained from another source. The lease was transferred several times and finally wore itself out in the process of trading. Not all of the townlot operators are bankrupt, but many of the small companies are finding it increasingly difficult to raise additional funds. Union Oil Company recently completed two small wells in the deep zone and will drill several tests on its holdings. Meanwhile, production remains around 34,000 barrels and the decline is slow. The shallow zone yielded a low average initial production and the steady decline was expected.

Bakersfield, Calif.—Shell Oil Company has reamed to bottom at 9700 feet in Williams 1, the Semitropic test which has established a new depth record, and will cement a string of 5¾-inch casing at 8600 feet. This well was drilled with little effort and broke the old record held by Standard Oil Company's Mascot 1 in about nine months. The last 700 feet of hole was made in less time than was required a few years ago to drill a similar distance between 6000 and 7000 feet.

Los Angeles.—Pacific Western Oil Company showed a net profit of $2,316,544 during 1930, as compared with a net of $1,816,985 during 1929. This was equivalent to $2.31 per share on the common stock outstanding, as against $1.81 during the previous year. The potential production of the company was in excess of 60,000 barrels daily at the end of the year, while the average daily production for the year was nearly 20,000 barrels.

Significance of Huntington Beach Deep Show in Doubt

Huntington, Beach, Calif.—Opinions differ as to the significance of Superior Oil Company's discovery below 7000 feet in Fee 1, which has been shut down at a reported depth of 7491 feet. This is the deepest well ever drilled in the immediate district and the outcome of the production test will largely determine the action of other operators. The formation at 7000 feet showed a high gas pressure, but a production test between the final shutoff at 7000 feet and 7250 failed to develop production. Shutting down of the well has been responsible for various rumors. Leasing has been active, however, and several operators have obtained additional tracts. Republic Petroleum Company has been given permission by the city to build two derricks. Sentiment is favorable toward increased operations, since the city of Huntington Beach enjoyed greatest prosperity during the development of the present producing zones. Completion of a large well in the deep zone would be the direct cause of widespread development.

Los Angeles.—Union Oil Company of California earned $9,604,997 during 1930, as compared with $15,019,635 during 1929, both totals representing net profits after all charges for depletion, depreciation and income taxes have been made. The net for the past year was $2.19 per share, as compared with $3.56 during the previous year.

Independent Association Is Active in California

Los Angeles.—The Independent Petroleum Association has become very active in California, pressing its campaign for memberships, considering legislation now pending before both the state and national legislative bodies, and generally working to organize the independent operator. Three classifications of memberships have been formulated, the first being a $50 membership for oil companies, the second a $25 membership for royalty owners and the third a $1 membership for individuals. Independent producers from all parts of the state were to meet in Los Angeles, Tuesday, February 24, to consider the legislation now before the California legislature. William G. McAdoo is expected to be among the speakers. W. E. Dunlap, formerly manager of production for Richfield Oil Company, is permanent manager of the association.

Erecting Tanks Before Test of Oil Show at Berthod Dome

Denver, Colo.—An interesting discovery was reported from the Berthod Dome structure last week. Standard Oil Company of Colorado (not associated with the major Standard group) reported 2500 feet of 38.8-degree crude oil standing in its 3765-foot hole in Hertha 1. Tanks were to be erected before an actual gauge of the production should be made, but it was evident that the showing was much more than had been found in the company's two north offsets which had been good for a settled production of about 14 barrels per day. The well had also had about a million cubic feet of gas at a horizon at 2810-20 feet which is being saved.

Oklahoma--Kansas Field Notes

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

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Nine Wells Completed in One Week at Oklahoma City

Oklahoma City.—Nine wells, six of which were completed in one day during the past week, recalled the hectic period in Oklahoma City when this number of completions in one day was regular practice and 15 to 25 new wells in a week were not considered unusual. Three locations were made. During the week ending February 16, daily average runs were 93,686 barrels and daily average production was 92,435 barrels. Daily average runs by companies were as follows:

	Barrels		Barrels
Century	254	Prairie	802
Continental	9,341	Shell	3,490
Empire	12,475	Sinclair-Texas	9,084
Magnolia	4,593	Stanolind	34,370
Oklahoma	14,962	Tidal	4,315
Total			93,686

This is an increase of 11,083 barrels over the week ending February 11, brought about by an increase of 15,991 barrels by Stanolind Pipe Line Company offsetting decreased runs by several of the smaller purchasers. So far as could be learned, Sinclair Consolidated Oil Corporation's offer to take 50,000 barrels daily at 67 cents per barrel had resulted in only one actual connection although several operators have indicated willingness to sell at this price. It was reported that Sinclair Pipe Line Company had purchased the six-inch gathering system of the Blackwell Oil & Gas Company and had run 3000 barrels on February 20 from properties belonging to Blackwell Oil & Gas Company and Jones Brothers Drilling Company. Daily average production for January from all properties of the two companies was 331 barrels and on February 1 they were 20,000 barrels over-produced, according to the field umpire. Under present proration orders the total gross production allowable from all wells of Blackwell Oil & Gas Company and Jones Brothers Drilling Company is 1971 barrels daily during February.

Phillips Petroleum Company's Nunn 1, SE NE NW Section 10-11n-3w, largest completion of the week, produced 11,011 barrels in four hours, flowing through a four-inch choke under 450 pounds back pressure. Gas was gauged at 47,000,000 cubic feet. This well encountered Wilcox sand at 6328 feet and, at 6505 feet was still in sand. One unusual feature of the completion was setting of nine-inch casing 20 feet above the top of the Wilcox sand. This has been done in several other wells but is not standard practice. The same company's Blazier 1, NE SE NW Section 10-11n-3w, gauged 8324 barrels in four hours from 180 feet of Wilcox topped at 6320 feet. Total depth is 6500 feet in sand. Empire Oil & Refining Company's Refinery 1, SE NE NW Section 3-11n-3w, penetrated 140 feet of Wilcox sand between 6312 and 6452 feet and was drilled to 6485 feet. Operators set 6450 feet of 5¾-inch with 184 feet of screen set one foot off bottom. Initial production was 2054 barrels in two hours and 45 minutes, flowing through a four-inch choke under 750 pounds back pressure.Gas gauged 23,000,000 cubic feet. Only a few wells have been equipped with oil strings less than 6⅝ inches in diameter and a few have been equipped with screens.

Oils Incorporated's Hathaway 1, SE SW NW Section 2-11n-3w, topped Oswego lime at 6043 feet, Wilcox sand at 6230 feet, and was drilled to 6490 feet. It flowed 7596 barrels in three hours and 10 minutes along with gas estimated at 40,000,000 cubic feet. T. B. Slick Estate's Whitfield 1, SW SE SE Section 34-12n-3w, in the northern portion of the pool, produced 7938 barrels in four hours from Wilcox sand topped at 6230 feet and drilled to 6485 feet, still in sand. Indian Territory Illuminating Oil Company had two completions in Section 10-11n-3w; Viewpoint 1, SW SE SE, topped Wilcox sand at 6390 feet and was still in the sand at 6480 feet. Initial four-hour gauge was 5663 barrels flowing through two 2½-inch chokes. Terrace Lawn 1, NW NE NE, had Wilcox from 6266 to 6360 feet and was bottomed five feet below the base of the sand. Initial flow was 6193 barrels in four hours. Anderson-Prichard and Phillips Petroleum Company's Sandness 1, NE SE NW Section 10-11n-3w, produced 6932 barrels in four hours from 199 feet of Wilcox topped at 6316 feet. Total depth is 6519 feet. Johnson and Dabney's Patton 1, NW SE NE Section 10-11n-3w, produced 8502 barrels in three hours from Wilcox sand topped at 6295 feet and drilled to 6385 feet, 25 feet below the base of the sand.

Tatums Pool Development Reaches Low Proportions

Tulsa.—Development was at its lowest point in several months in the Tatums district last week when only one well was completed. There are three drilling wells, one location shut down waiting on cement to set on the water string and two shut down for mechanical difficulties. Magnolia Petroleum Company's Ethel Gill 9, SW SE NE Section 23-1s-3w, in the older portion of the pool, was completed on the swab for 76 barrels during the initial 24-hour period. Production is coming from sands logged from 2260 feet, where the casing was cemented, to 2551 feet. This well is an inside location, offset by old producers on the east, south and west. Leonard J. Woodruff's Brady 1, NW SW SW Section 32-1s-2w, new producer about two miles southeast of the pool, is shut down for orders after testing 25 to 50 barrels daily of 28 gravity crude. Production is coming from sands found between 1741 feet, where casing was set, and the total depth at 2300 feet. The most productive part of the sand is believed to be between 1800 and 2000 feet. The well is still showing a small amount of salt water. Frank Gouin et al have rerun rods and resumed pumping Burton 1, SE SW NE Section 31-1s-2w, three-eighths of a mile northwest of Woodruff's Brady 1, and on a northeast line between that well and the southeast edge of the pool. The initial test was 109 barrels in 24 hours from sands logged at 1834 to 1844 feet and 1844 to 1962

feet. Production dropped to about 60 barrels shortly after the initial gauge had been taken and rods were pulled to correct a mechanical difficulty. No gauge is available since the last rod installation. Both of these tests extended production to the southeast.

C. L. Anderson has set 400 feet of liner and is washing in Eaves 8, SE NW SW Section 24-1s-3w, near the south edge of the pool. Broken sands were encountered at 2370 to 2410 feet and solid sand from 2425 to 2500 feet. Magnolia Petroleum Company's R. F. McCrory 1, SE SE SE Section 10-1s-3w, slightly over a mile northwest of the pool, is shut down repairing boilers, depth 2700 feet. This test is showing signs of failure after being drilled to 3520 feet and plugged back to 2680 feet to test sands logged at 2353 to 2383 feet. A liner was set in this series and only a small showing was found.

The most interesting test in the pool is Magnolia Petroleum Company's Mose Dickerson 4, SE SE NE Section 24-1s-3w. It is an east offset to Dickerson 2, which came in with an initial production of 2468 barrels in 24 hours from sands logged at 1935 to 2100 feet, and a northeast offset to Dickerson 1, which was abandoned at 4240 feet after failure to locate production in the usual horizon. Dickerson 4 is now shut down waiting on cement at 1915 feet. Sand was encountered at that depth to 1931 feet.

Carter Oil Company, Cox, and Hamon are drilling below 1650 feet in Hooks 2, NE SE NE Section 24-1s-3w, on the east edge of the pool and Amos Drilling Company is drilling below 1200 feet in Hooks 2, SW SE SE Section 13-1s-3w on the north side of the pool. The latter test had been shut down for water.

Preparing to Test Show in Test East of Comanche

Tulsa.—George Pace is preparing to drill plugs in his Watkins Estate 9, NE SE SE Section 21-2s-7w, about two miles east of the town of Comanche. Casing is cemented on oil sand topped at 1716 feet and penetrated to 1721 feet. The same operator is preparing to drill plugs in his Bush 5, SE NE NW Section 3-2s-8w, on the southeast edge of the old Empire pool. Casing is cemented on oil sand topped at 1634 feet and penetrated to 1640 feet. S. B. Cooper et al are waiting on cement to set in their Duncan 1, NW NW NE Section 28-2s-7w, south of the Watkins Estate lease and an east offset to the Carter Oil Company's small pumper which was completed several months ago. Casing is set on oil sand topped at 1688 feet and drilled to 1699 feet. A. L. Andree et al have resumed drilling in G. S. Patrick 1, CE½ SE Section 3-3s-8w, about three miles west and two miles south of Comanche. It has been shut down for several weeks at 1860 feet.

Tulsa.—Batson and Starritt are moving in tubing and rods preparatory to pumping Dillard 1, CSE NE NW Section 25-6s-2e, about five miles northeast of Marietta in Love County. It is estimated good for a small producer from sands at 1585 to 1596 feet. Results of the pumping test will be of considerable interest in view of the fact that this test was abandoned several years ago by another operator after being drilled to 4433 feet. The present operators have spent several months cleaning out to test the upper sand.

Greater Seminole Pools Show Production Increase for Week

Tulsa.—Estimated daily average production for the week ending February 18 was 165,408 barrels from 13 pools in the Greater Seminole district, an increase of 8488 barrels over the previous period. Reports that considerable amounts of Seminole crude were being drawn from storage apparently have not taken into account the full amount being run to storage. It is estimated that about 20,000 barrels net are being withdrawn from storage in Kansas and Oklahoma. Status of the 13 pools as of February 18, was as follows:

Pool	Rigs	Drilling Loc.	Prod. Wells	Prod.	Increase	Decrease
St. Louis	1	.	1	472	21,697	1,056	....
Little River	.	.	.	369	24,936	1,058	....
E. Little River	.	.	.	82	9,556	....	706
Carr City	.	2	7	78	14,815	4,180	....
Maud	.	.	.	133	2,426	....	57
Mission	.	.	.	93	8,401	581	....
Bowlegs	.	.	.	278	13,747	598	....
Earlsboro	1	.	.	283	17,606	....	305
S. Earlsboro	.	.	.	27	8,195	824	....
E. Earlsboro	.	.	1	158	21,722	1,679	....
Seminole	.	.	1	254	13,580	....	908
E. Seminole	.	.	.	33	1,933	26	....
Searight	1	.	.	82	5,794	462	....
Total	3	2	10	2342	164,408	10,464	1976

PRODUCTION FROM IMPORTANT OKLAHOMA POOLS

Daily Average Week Ending February 18

	No. Prod Wells	Production	Increase	Decrease
Greater Seminole	2342	164,408	8488	....
Oklahoma City	717	94,500	....	2080
Konawa	111	15,650	180	....
Wanette	54	8,523	63	....
Burbank	2090	13,400	....	....

Carr City

Carter Oil Company's Coker 8, NE NE SW Section 2-8n-5e, topped Woodford at 3850 feet and has a fishing job at 3915 feet. The same company's Coker 5, NW NW SE, east offset to Coker 8, topped Cromwell sand at 3610 and was drilling ahead after having top of the Caney shale at 3630 feet. Prairie Oil and Gas Company et al set eight-inch casing at 3940 feet, 22 feet in the Woodford shale in Fixico 5, SE SE NW Section 2-8n-5e, north offset to Carter Oil Company's Coker 8. Total depth is 3940 feet. Pine's Tiger 1, SE NW SW Section 3-8n-5e, pulled the five-inch casing and plugged back from 4234 to 4180 feet where it swabbed 55 barrels of oil and 190 barrels of water in 24 hours. It will be placed on the pump.

Gypsy Oil Company's Wolfe 2, NE SW NW Section 26-9n-6e, old well drilling deeper in the Seminole pool, had base of the First Wilcox at 4315 feet and was drilling below 4318 feet.

Magnolia Petroleum Company's Harjo 3 "A", NW NE NE Section 14-7n-6e, inside location in the Little River pool, was completed for 432 barrels in 24 hours at a total depth of 3211 feet in sand. Gas was gauged at 13,000,000 cubic feet. The same company's Spaulding 1, SE NW NE Section 6-7n-7e, in the East Little River pool, was dry and abandoned at 3341 feet after having Cromwell at 3282 to 3300 feet with nothing showing. Magnolia Petroleum Company has announced location for Powell 1, NWc SW SE Section 15-6n-7e, wildcat test about six miles southeast of the Little River pool.

Gilcrease Oil Company cored dry sand at 3140 to 3143 feet in Buckner 1, NE NW SE Section 17-7n-9e, approximately three-quarters of a mile east of the town of Holdenville.

Mid-Continent Petroleum Corporation is running six-inch

casing to set at 3518 feet after having a good show of oil in sand at 3522 to 3529 feet in Archer 2, SE SW SE Section 14-6n-3e. Twin State Oil Company's Archer 4, NE NW SE Section 22-6n-3e, was completed for 1520 barrels in 24 hours and shut in for proration. Sand was encountered at 3537 to 3548 feet. Payne Drilling Company's Bullock 5, SE SW NE Section 22-6n-3e, on the discovery lease had the base of the sand at 3577 feet and was drilled to a total depth of 3581 feet.

Mid-Kansas Oil & Gas Company's Davis 4, NW SE SW Section 30-8n-8e, produced 4407 barrels in 24 hours from 13 feet of Wilcox topped at 3970 feet. Total depth is 3983 feet. Deep Rock Oil Corporation's Douglas 4, (50A) SE SE NW southeast offset to Mid-Kansas Oil & Gas Company's Davis 4, flowed 10,880 barrels in 24 hours through tubing. Top of Wilcox was encountered at 3930 feet and total depth is 3952 feet. It is cutting about 10 per cent water and probably will be plugged back. Mid-Kansas Oil & Gas Company has announced location for Davis 5, NW SE NW twin to Davis 4.

Magnolia Petroleum Company's Reed 1, NE NW NE Section 26-5n-7e, in the Allen district, blew out at 2653 feet and started blowing wild at an estimated rate of 75 to 100 million cubic feet of gas. The flow was killed with 960 sacks of baroid and drill pipe is now stuck. The same company cored a show of oil at 2760 to 2773 feet in Whitney 1, NW SW SE Section 24-5n-7e, and set pipe on top of the sand. Total depth is 2773 feet.

Mid-Continent Petroleum Corporation abandoned Harjo 1, Section 6-5n-6e, in Caney shale at 2730 feet. Several small shows of oil were cored in sandy shale before reaching Caney.

Start Important Wildcat Test in Western Kansas

Tulsa.—Slush pits are being dug and material moved in for one of the most important wildcat tests that Western Kansas has known in several years. Announcement was made by Carter Oil Company of intention to drill a 6000-foot test on the Ellen Everett estate, CNE Section 22-29s-21w, four miles southeast of Bucklin in southeastern Ford County. Twenty quarter-sections out of a 28,000-acre block were pooled with Carter Oil Company, Mid-Kansas Oil & Gas Company and Prairie Oil & Gas Company interested. The two latter companies are reported to own a one-twentieth interest each.

Carter Oil Company spent several months core drilling the block and a number of the tests were carried as deep as 1800 feet. The deepest test so far drilled in Ford County was by Dodge City Oil Company, which drilled to 3650 feet in Holladay 1, SWc Section 7-25s-23w, in the northern part of the county. To the south in Clark County, Watchorn Oil & Gas Company drilled Morrison 1, SE NE NE Section 20-32s-21w, to 5679 feet; Stephen 1, NW NE NW Section 21-32s-21w, to 3930 feet; Stephen 1, SW NE NW Section 21-32s-21w, to 4297 feet, and Stephen 3, CNW NW Section 21-32s-21w, to 5475 feet after encountering 20,000,000 feet of gas in sand between 4840 to 5475 feet. The other tests were dry. However, it is reported that as much as 100 feet of Wilcox sand was encountered in the deepest tests.

The new location is reported to be located on a regional high extending southwest from Barton County through Pawnee, Edwards, Kiowa, Ford and Clark Counties and into Northwestern Oklahoma. The Carter Oil Company is among the leaders in restricted drilling and at this time is actually drilling only three wells including the Everett Estate well. It is to be drilled because of lease requirements but only after an agreement had been reached with royalty owners under the block to permit shutting the well in (should it be a producer) until such time as market conditions would warrant production from the well. It was further agreed that the operators would do no further drilling until such a procedure is justified by changed conditions.

Ritz Pool, McPherson County, Most Active Spot in Kansas

Wichita, Kansas.—The Ritz area in McPherson County, is leading development in Kansas, both in the number of wells drilling and the size of completed wells. There are now 35 drilling wells, eight rigs, and nine locations in the vicinity of the original Ritz pool extending over a large part of four townships. Thirty-one completed wells are producing slightly in excess of 6000 barrels daily on an estimated potential of 51,000 barrels daily.

Reserve Oil & Gas Company and Shell Petroleum Corporation's Ritz 1, SE SW Section 31-19s-1w, 1½ miles south of the pool, produced 1264 barrels initially when eight feet in the Viola lime at 3408 feet. About two miles to the north C. B. Davis and Shell Petroleum Corporation were shut down for erection of tankage at Ritz 1, SE SW Section 19-19s-1w, after getting a hole full of oil and one foot in the Viola lime at 3430 feet. Helmrick & Payne's Bosker 1, CNW NW SE Section 18-20s-1w, is reported to be about 40 feet structurally lower than nearby tests and has a hole full of water from the producing horizon. Locations have been announced in NE NW Section 36-19s-2w; SW SE NE of the same section, and CNW SW Section 2-19s-2w. The latter two are by Lario Oil & Gas Company and Moriarity et al, respectively.

Status of the principal active areas in Kansas as of February 18, was as follows:

Area	Loc.	Rigs	Drilling Wells	Prod. Wells	Prod.	In-crease	De-crease
Sedgwick	1	1	4	192	21,000	200	....
Voshell	.	.	.	96	22,460	....	4640
Ritz	9	8	35	31	6,290	10	....
Eastborough	1	1	4	35	7,800	....	260

Production had been up 8900 barrels the week before in the Voshell pool immediately following the lifting of proration. It was known from the pipe line outlet that this rate could not be continued for long and the record indicates that some operators who were running to storage were forced to withdraw from the practice of wide-open flow.

Continental Oil Company's Nagel 1, NW Section 19-27s-2e, in the northern part of the Eastborough pool, was running liner at 2990 feet after drilling 11 feet into the chat and getting a showing of oil. Magnolia Petroleum Company's J. A. Vickers 1, SWc Section 17-27s-2e, east offset to National Refining Company's Murdock 3, has a good showing of oil in the top of the chat at 2942 feet and is pulling the big pipe. Streeter & Stearns' Tobin 1, wildcat test about 2½ miles northeast of production in Section 5-27s-2e, is drilling below 3260 feet.

Barnsdall Oil Corporation and Graham Oil Company are drilling below 2555 feet in Turner 1, Section 28-20s-10w, 1½ miles southwest of the Schurr pool in Rice County.

New Mexico and Rocky Mountain Area

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Eunice Continues Active Despite Limited Outlet

Hobbs, New Mexico.—An outpost test on the north end of the Eunice field, Lea County, gives promise of becoming the largest producer through having started the present week off with a daily output of 800 barrels of 34 gravity oil by heads while drilling ahead in lime formation at 3910 feet. This new producer was drilled by Atlantic Oil Producing Company on the O. L. Coleman 40-acre lease, and located in the SWc NE NW Section 17-21s-36e, thus forcing a west offset by Skelly Oil Company et al and possibly two tests to the south by Continental Oil Company and The California Company. Coleman 1 is the eighth successful oil completion for the field, which has been averaging about 3000 barrels daily, but took a 50 per cent reduction in output effective February 20 as result of meeting held by operators last week for the purpose of curtailing production to conform with pipe line outlet and market demand. Such an arrangement provides for the marketing of oil from future completions, thus allowing for a continuation of a reasonable volume of development work.

Cable tools were installed in Atlantic Oil Producing Company's Coleman 1 after drilling past heavy gas production to 3795 feet. The last string of casing consisted of seven-inch at 3725 feet, shutting off a flow of about 40,000,000 cubic feet of dry gas. Coleman 1 filled 1500 feet with oil from saturated lime at 3852-56 feet, and increased as deepened. Since it is producing from a much higher section of lime than other wells in the field it is to be carried deeper. First brown lime was logged at 2945 feet, with a surface elevation of 3627 feet. The California Company's Meredith-State 1 is drilling below 3300 feet, using nine-pound mud per gallon to control gas encountered in upper horizons.

Efforts of the National Securities Oil Corporation to extend the oil area nearly four miles to the west of the Hobbs field went amiss last week by encountering sulphur water at 4270-72 feet, or at the level oil was expected. This concern's T. A. Linam 1 was supported by favorable structural conditions, and aroused considerable interest when it encountered the usual gas production in upper section of the lime. It may be plugged back.

Company Organized to Drill Eastern Colorado Structure

Denver, Colo.—Aztec Corporation has recently been incorporated in Colorado for the purpose of drilling a test on an Eastern Colorado structure this summer. Organizer of the company is Miller Robert Taylor, who was identified with the organization of Quad States Enterprises, Inc., and Mountain Oil Corporation, which together were reported to have spent some $300,000 in explorations in the Rocky Mountain States. Mountain Oil Corporation is drilling on the Wyoming structure, in Lincoln County, Wyoming; it is one of the eight major operators holding blocks of acreage and contributing bottom hole money for the test. This operation was the first of the co-operative group development projects to be approved by the Secretary of the Interior under the law enacted last year by congress which gave him that power.

Wells Near Denver, Drilling Since 1925, Reports Show

Denver, Colo.—What would appear to be an actual discovery of oil in a wildcat test in Eastern Colorado, was reported here with some authority this week by a few interested persons and one reporter who were allowed to visit the well. It is MacDeb Drilling Company's Fitzsimmons 1, 10 miles east of Denver and one mile south of the U. S. Army's Fitzsimmons General hospital, which is showing considerable oil at 5735 feet. There is some gas with the crude, which is said to be of a light brownish-green color. The well was shut down on January 14 last, and has been standing at 5735 feet since that date. Identity of the horizon from which the showing is coming is not known. Some geologists believe it to be the Niobrara shale, while others believe it to be the Hygiene sand in the Pierre shale.

The well was started in 1926 and has been intermittently drilled since. It is south and west of the Greasewood Dome discovery well, and 35 miles southeast of the old field at Boulder. It is considered important because of its testimony concerning the wildcat possibilities in Eastern Colorado.

New Company Takes Over Drilling on Kelly Dome

Denver, Colo.—Eastern Colorado Oil Company, of which M. K. Mouser is president and C. Leonard Smith is vice president, has recently been formed to take over the Kelly Dome operation of Kelly Oil Company in Lincoln County, Colorado, which has been standing at 3380 feet. The new company has also taken over acreage surrounding the well, and is now moving in new equipment, building new camp, and otherwise preparing to resume the operations as speedily as possible. Hole is standing cased to 2450 feet with 4¾-inch, and this is to be underreamed to bottom and set there. Test is particularly interesting because of its having had several showings of both oil and gas. Muddy sand is the ultimate objective, expected around 3450 feet.

Casper, Wyo.—Although it is generally believed that the production in the Midwest Refining Company's wildcat discovery well on Midway dome structure, 12 miles north of Casper, was materially improved by the small shots of nitroglycerine given it last week, no official announcement has been made of the pumping test which was conducted. After the shots and before the well went on the pump the production was said to have risen 3500 feet in the hole. If the pumping test did not prove satisfactory, it was intended to drill the well deeper.

East Central Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

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Three Million-Barrel Contracts Signed for East Texas Crude

Tyler, Texas.—Three separate crude contracts involving the delivery of 1,000,000 barrels each, and a varied assortment of smaller ones for high gravity East Texas crudes from fields in Rusk and Gregg Counties indicates that producers have little faith in enforcement of proration and payment of higher crude prices in the near future. This 38-40 gravity crude is now commanding an average market price at the well of slightly less than one cent per gallon, and the market has expanded to refining centers in Canada, along the Atlantic Coast, Arkansas, Louisiana and Texas, while invasion of the Middlewestern refining points is virtually assured in tank car shipments and possibly later by the extension of trunk lines.

Crown Central Petroleum Corporation made contract last week for 1,000,000 barrels oil to be delivered at rate of 4000 barrels daily from the Joiner field properties of W. B. Hamilton-Consolidated Oil Company-Trico Oil Company-Jenkins and Saner at a flat price of 45 cents per barrel net to the producer. The above purchaser will move the oil in tank cars to its refinery at Houston. Hamilton and associates already have a contract to sell the output of their single producer to the Petroleum Marketing Corporation for 30 days at a flat price of 35 cents per barrel at the well, and deliveries began about February 6, with shipments averaging 2000 barrels daily.

A flat price of 40 cents per barrel at the well is to prevail in the sale of 1,000,000 barrels of Joiner field crude by W. D. Anderson, Roy Cameron and associates of Fort Worth to Joe Butler-John Calhoun-J. D. Wrather and associates, who are to erect a skimming plant near Overton, Texas, or west of the field. The latter plan to take oil and make tank car shipments to distant refining centers in advance of the completion of their refinery, and are obligated to begin running and purchasing crude by March 24.

East Texas Refining Company was the first to contract a large amount of crude, having made a deal early in January for 1,000,000 barrels to supply its skimming plant now nearing completion on the first unit of a 6000-barrel daily capacity refinery at Friar Switch, located several miles northeast of the Joiner field. Rusk County Pipe Line Company, which is owned jointly by C. F. Kolp, Frank Foster and Freeman Burford, agreed to deliver the above crude from producing properties owned jointly by Foster, Kolp and others and also from outside connections. Burford is president of the East Texas Refining Company, and has lately contracted for a large volume of crude to be delivered by Gregg County operators to a second refinery to be built near Longview.

Panola Pipe Line Corporation (H. L. Hunt et al) has contracted to deliver 50,000 barrels crude from the Joiner field to the American Petroleum Company's recently completed skimming plant on the Houston Ship Channel. A flat price of 50 cents per barrel f.o.b. tank cars is reported to apply on this deal.

Invasion of the Wichita Falls district crude market by East Texas crudes is reported to have occurred lately as result of tank car shipments being made to the Falls Refining Company's plant, near Wichita Falls, from the Joiner field. H. W. Roberts, Roy I. Carter, John Parker and others own the above plant, and also the 2500-barrel skimming plant of Beacon Oil & Refining Company, which is nearing completion on the I&GN Railroad between Friar Switch and Henderson, or southeast of the Joiner field. A freight rate of 14 cents per 1000 pounds applies on such oil shipments to Wichita Falls.

Sinclair Refining Company reported to have contracted to purchase 200,000 barrels of crude from the Joiner field properties of the Haynes Drilling Company at a flat price of 40 cents per barrel at the wells, or 45 cents per barrel gross, with five cents tariff going to Inland Waterways Pipe Line Company for gathering and loading the oil aboard cars.

Tonkawa Petroleum Corporation is a prospective entrant with a refinery project for East Texas, and is reported to be considering the erection of a 5000-barrel skimming plant near Tyler, while crude supplies would be obtained from Rusk and Gregg Counties via the six-inch line to be built to Tyler by Taylor Refining Company. The latter is also starting work on a plant at Tyler.

Forty Tests Under Way in Kilgore, Rusk County, Area

Tyler, Texas.—Kilgore field, northwestern Rusk County, started the week off with three wells on restricted production as result of completions having been made to the south of the discovery well, and more than 40 tests are now under way, or getting started on nearby leases. While these two completions opened the way for further extensions to the south, and possibly a connection with the Joiner field, the production trend to the northeast is also considered open for major extensions toward the Longview field.

Ed. M. Jones and Houston Oil Company's W. R. Crim 1 was placed on production February 20 from Woodbine sand at 3675-95 feet, making 2425 barrels of oil during 17-hour gauge, flowing through 6⅝-inch casing and 2½-inch tubing through a three-quarter-inch choke. The well flowed 5135 barrels during the 24 hours ending 7 a. m., February 22, with 125 pounds tubing pressure. The oil tests 42 gravity at 76 degrees temperature, and is being shipped in tank cars by Houston Oil Company to its refinery at Camden, Arkansas.

John W. Olvey and Sample's Crim 1, located on 20-acre lease and an east offset to the above producer, was completed about 24 hours later from sand at 3688-3708 feet, with an open flow gauge of 140 barrels of oil in 15 min-

utes. It was allowed to produce 480 barrels during the first 12 hours after cleaning the hole of drilling fluid, then pinched to about 10 barrels per hour. About 4000 barrels lease storage was provided, and in the meantime negotiations are being made for market. Cordova Union Oil Corporation-W. E. Duffey and Nelson Brothers' Christian 1, a west offset to Jones et al's producer, was coring for the sand early this week, while Humble Oil & Refining Company's L. D. Crim 1, a north offset to Olvey et al's well, has cemented pipe after coring into sand at 3699-3793 feet.

Important extensions to the northeast of the Kilgore field became assured during the week when H. R. Smith et al's D. M. Peterson 1, located about one mile in advance of production, cored regular sand at 3660-70 feet, then cemented casing on cap rock at 3658 feet. Peterson 1 will be completed early this week, and its preliminary showing has resulted in two tests being started by Stanolind Oil & Gas Company on an adjoining lease to the west, while Magnolia Petroleum Company has set up derrick on its Ben Laird 82¼-acre lease to the northwest.

Continuation of the Kilgore field more than two miles further to the northeast and near the east edge of the town of Kilgore loomed possible early this week when W. L. Brandon et al's J. F. Richards 1, Mary Van Winkle Survey, encountered Austin chalk at 3428 feet after logging Pecan chalk at 2540-2927 feet, with a surface elevation of 339 feet. Richards 1 is catching the key formations at about the same level as found in the producers, and is being rated as a potential producer.

Sudden Rise in Temperature Checks Gregg County Output

Tyler, Texas.—Sudden rise in temperature of the oil produced by Arkansas Fuel Oil Company et al's Lathrop 1, discovery well and only producer in Gregg County, caused the owners to abandon their plans for a withdrawal of between 10,000 and 12,000 barrels daily for tank car movement to refineries at Shreveport. The well was clicking off more than 11,000 barrels daily late last week when the temperature of the oil advanced to about 120°F., as compared to a normal of between 70 and 80 degrees during the fore part of the week when production was restricted to about 4000 barrels daily. Although completed wells in both Gregg and Rusk Counties are free from water, an abnormal advance in oil temperature usually forecasts the arrival of water in all Woodbine sand areas, and these fields are not expected to prove an exception to the rule.

Rather than to expose the Lathrop well to water intrusion the owners have pinched the flow to about 6100 barrels daily, and will likely hold the flow near such a level. In the meantime J. E. Farrell, W. A. Moncrief and other individuals that own an undivided half interest in the well and 96-acre site along with Arkansas Fuel Oil Company, and a block of about 2500 acres of nearby leases are on a deal to sell out to a new prospect. Arkansas Fuel Oil Company failed to consummate the purchase of the holdings of these individuals, and the latter are reported to be negotiating with the Yount-Lee Oil Company of Beaumont. Should Yount-Lee Oil Company make the purchase it is quite likely that a private trunk line would follow to the coast.

Half dozen offset locations are already facing the two groups that discovered the Longview field, and they are not attempting to match this drilling because of possibilities of Farrell-Moncrief et al making a sale of their interests shortly. Companies and individual operators have encroached upon the discovery block in all directions as well as within same on small tracts, and additional completions can be expected by the middle of March. Several new tank car rack lines, and projected refineries are slated for the field, while Magnolia Pipe Line Company is starting work on a trunk line connection.

Only Edge Wells on Dead List in Rusk County Pool

Tyler, Texas.—With few exceptions, the Rusk County wells that refuse to flow upon completion, or those that have gone dead after starting off with natural discharge, are confined to the east side and near the pinching out point of the sand horizon. Several weeks ago when the Joiner field discovery well and a group of nearby small wells ceased to flow, production men expressed fear that a similar fate would soon be experienced by wells in the prolific but closely drilled areas.

The accompanying production table shows the status of the various producers, including casing and tubing pressures on most of the wells that are flowing against restrictions. The outstanding disappointment came from Frank Foster-M. G. Jeffries and Chas. Kolp's Mayfield Alford 1, which went dead early this month after testing 158 barrels oil per hour on a two-hour gauge taken in advance of completion of pipe line connections. The hole apparently bridged, as it was not equipped with liner and tubing. It remained off production for about 10 days, and when cleaned out refused to flow. The hole was deepened from 3630 to 3640 feet, resulting in a brief comeback of 2740 barrels during first full 24-hour gauge. However, the flow decreased to less than 1000 barrels, and then had to be swabbed for production. Geo. S. Anderson et al's Camp 1, which set an initial flow record for the field February 10 by earning a rating of 10,000 barrels capacity on brief open flow tests from broken sand at 3564-3590 feet, went dead within a week, but resumed natural flow on the night of February 22.

W. B. Hamilton-Consolidated Oil Company et al's Camp 1 is proving itself a consistent producer after being on steady production for two weeks, and is holding at 2000

EAST TEXAS PRODUCTION

Crude production of all wells during the 24-hour period ending 7 a. m. February 21, 1931, is given below, with average casing and tubing pressure included:

GREGG COUNTY

	Daily Prod.	Pounds Casing Pressure	Pounds Tubing Pressure
Arkansas Fuel Oil Co. et al's Lathrop 1	6,150	365	100
RUSK COUNTY			..
Akin-Rayzor-Dearing's Ashby 1	1,365	...	...
Geo. S. Anderson et al's Frederick 1	Dead	...	...
W. D. "Andy" Anderson et al's Bradford 1	Dead	...	...
Ball-Malone et al's Bradford 1	2,490	50	30
Deep Rock Oil Co. et al's M. Alford 1	2,880	120	20
Federated Oil Co.'s Mayfield Alford 1	1,990	Open	...
Foster-Deep Rock et al's Ashby 1	1,105	125	20
Foster-Jeffries-Kolp's M. Alford 1	680	Swabbing	...
Foster-Wainwright-West et al's Camp 1	465	Pinched	...
Hamilton-Consolidated et al's Camp 1	2,095	Open	...
Haynes Drilling Co.'s J. T. Brown 1	3,065	Open	50
Humble O&R Co.'s L. D. Crim 1	215	400	450
H. L. Hunt et al's Ashby 1	350	...	...
Ashby 2	Dead	...	...
Bradford 1	Dead	...	...
Bradford 2	Dead	...	...
C. M. Joiner's (E. R. Tennant, Rec.) Bradford 1	Dead	...	...
E. M. Jones-Houston Oil Co.'s W. R. Crim 1	4,125	...	125
Laster Oil Co.'s Bradford 1	Dead	...	...
Lide-Taylor Oil Co.'s C. Young 1	2,565	...	70
Tex Lloyd et al's Camp 1	750	...	...
John W. Olvey & Sample's W. R. Crim 1	480	Pinched	...
Robert Oil Corp. et al, Ashby 1	1,350	225	50
Rusco Oil Co.'s Bradford 1	Dead	...	...
Bert J. Shaw Oil Co. & Andrade's Ashby 1	1,430	150	50
Stroube & Stroube's Frederick 1	95	Pumping	...
Total for 19 producing wells	33,645		

barrels daily, although originally only a 2400-barrel producer. Foster-Deep Rock-Moncrief et al's Ashby 1, first big producer in the Joiner field, has registered a steady but moderate decline within the past three weeks, and is down to about 1100 barrels daily. This well made a peak flow of 4170 barrels in the middle of January, and has produced more than 100,000 barrels oil.

Tex Lloyd et al's Camp 1 has also proven itself a consistent, but small producer, and has been averaging close to 750 barrels daily for the past three weeks. Akin-Rayzor and Dearing's Ashby 1 was difficult to start on natural flow in completing, but since has been holding at about 1350 barrels daily for the week.

Tests Started for Other East Texas Counties

Marshall, Texas.—Two new wildcat locations, one in Harrison County and one in Panola County, were definitely staked during the week ending February 21 as Marion, Harrison and Panola Counties continued in the midst of a lease blocking and trading campaign. W. H. Hobson, Trustee, made location for P. P. Taylor 1, Henry Vardeman Survey, Harrison County. Just north of Teneha, Texas, but in Panola County, Everett Production Company ran derrick pattern for E. L. McDaniels 1, Alamson Barr Survey.

Vilbig Oil Company of Dallas has taken over Hussey 1, Charles Lockhart Survey, Marion County, and the block of several hundred acres on which it is located, from A. A. Trammell and associates, and is planning to skid derrick over a new test, the original hole having broken drill stem in the hole and efforts to go over it with six-inch casing have been futile. This test with elevation of 282 feet topped chalk at 1771 feet and finally landed 8¼-inch casing at 1514 feet after considerable difficulty, after a show of oil was reported in two feet of lime near bottom of hole, whose total depth is 1878 feet. Stockholders in the original project will get stock in the new arrangement, it is reported. Late last week Rondeau and Hidman's McGaugherty 1, W. J. Wills Survey, in Harrison County, was shut down at 2450 feet.

In Harrison County, Siegel Brothers and associates of Wichita, Kansas, have blocked 2500 acres in the E. O'Neal Survey, near Leigh, obligating to spud a 4000-foot test by April 12. N. L. Howard has blocked 2000 acres near G. G. Nesbit's 6000-acre block in Harrison County, centering in the John Page Survey. Nesbit is reported to have assigned J. W. McCullough half of his block for an immediate test. S. D. Hunter and associates' Daugherty 2, W. B. Burris Survey, near Hallasville, Harrison County, late last week was drilling rock at 3202 feet.

Natural Gas Products Company's H. H. Alvord 1, B. C. Jordan Survey, Panola County, tested 5,000,000 cubic feet of dry gas in the upper Trinity at depth of 4698 feet, during the past week but will be deepened in an effort to increase the output.

Tyler, Texas.—Participants in the drilling campaign now getting under way in Rusk and Gregg Counties involves operators and companies that have been attracted from all sections of the country, including Canadian concerns. It is quite evident that scores of additional names will be added to the active drilling reports within a few weeks, as trading in small leases along the 25-odd mile stretch

Field Operations in New East Texas Area

RUSK COUNTY FIELD OPERATIONS

Extent of field operations in Rusk County is illustrated by the following table that lists each operator and status of operations:

Operator—	Locs.	Derricks & Rigs	Active Tests	Total
Geo. Anderson-Cox-Lloyd		2	1	3
W. D. "Andy" Anderson et al		1	1	2
C. Andrade et al		3		3
Babcock-Gordon Oil Co.	1		1	2
Ball & Malone et al	1			1
Nick Barbare (UOG&M Co)	1		1	2
H. L. Blackstock		1		1
Harry W. Bleam et al		1		1
Burton Drlg. Co. (Sabine Synd.)			2	2
Butler-Heflin et al		1		1
Capps-Smith-Anderson et al.			1	1
Roy I. Carter et al			2	2
Carolyn Oil Corp.	1			1
E. L. Chapman et al		1		1
Cordova Union Oil Corp. et al	1		1	2
Cox & Jake Hamon, Jr. et al		1		1
Crabtree-Rowe & Johnson			1	1
Cranfill-Reynolds Co.			1	1
J. G. Curtis et al			1	1
Dave & Bill Oil Co.			1	1
Geo. DeMontraud et al			1	1
Dan Dillon et al		1		1
Dohman et al		1		1
W. H. Dunning & C. P. Link		1		1
East Texas Ref. Co.		1		1
Elzey Drilling Co.		1	1	2
Geo. Fagg et al			1	1
Federated Oil Co.	3	1	1	5
Frank Foster-Deep Rock et al		2	1	3
Foster-Jeffries & Kolp			1	1
Foster-Wainwright-West et al		1		1
Gibson-Johnson-Merrick Drlg. Co.			1	1
R. W. Giles (Shreveport Prod. Co.)		1		1
J. Griffith et al		1		1
W. B. Hamilton-Consolidated Oil Co.		2		2
Haynes Drilling Co.		1	2	3
Hill & Jack Younger		1		1
Humble O&R Co.		2	7	9
H. L. Hunt et al		2	4	6
C. M. Joiner (E. R. Tennant, Rec.)			2	2
Ed. M. Jones-Houston Oil Co.			2	2
Karona Oil Co. (Heard Bros.)			1	1
Lasalle & Davenport	1			1
Laster Oil Co.			1	1
Laster Oil Co. & Miller		1		1
Latex Oil Co.			1	1
Lide-Taylor Oil Co.		1		1
Lide-Rowe et al		1		1
Lively & Bryan	1			1
Lloyd Oil Corp. et al			1	1
Luling Oil & Gas Co.			1	1
Magnolia Pet. Co.	1	3	1	5
Chas. McDonald et al			1	1
McIntyre Drilling Co.		1		1
Merrick Drilling Co. et al		1		1
Mid-Kansas O&G Co.		1		1
H. S. Moss & Pete Urschell		1	1	2
Moss et al			1	1
Oliver & Brown		1		1
Olsen Bros. et al		1	1	2
John W. Olvey & Sample				
Pearl Oil Co.			1	1
Petroleum Marketing Corp.		2	2	4
Pilot Oil Co. (Cranfill)			1	1
Republic Prod. Co.	1			1
Robertson Drilling Co.		1		1
Rusk County Oil Co.			1	1
J. Rush et al		1		1
Nat Sadler et al			1	1
Bert J. Shaw Oil Co. et al		1	1	2
Shell Pet. Corp.	1			1
Sinclair O&G Co.		2	3	5
H. R. Smith et al			1	1
Stanolind O&G Co.	1	1		2
C. H. Tautenhahn et al	1			1
Texas Inland O&G Co. (Basom et al)		1		1
Tidal Oil Co.-Wm. Johnston	1		1	2
Turman Oil Co.	1			1
C. E. Upchurch et al		1		1
Graddy Vaughn et al	1			1
Westexas Oil & Roy. Corp.		1		1
Witherspoon Oil Co.		1		1
Woodley Pet. Co.		2		2
Total	18	56	60	134
Total previous week	18	34	49	101

GREGG COUNTY OPERATIONS

Alco Oil Corp.	1			1
Arkansas Fuel Oil Co.		1		1
Bell-Graddy et al			1	1
W. L. Brandon-McCamey et al			1	1
D. H. Byrd-Gulf-Humble		1	1	2
Daniel & Patten		2		2
Harry W. Elliott et al			1	1
E. E. Eslick & Little			1	1
Frank Foster-Selby O&G Co.			1	1
Mamie Hammond-Clark et al			1	1
O. T. Hickman et al		1		1
Ed. B. Hopkins & A. R. Byrd, Jr.		1		1
Hurlbert et al		1	1	2
Lide-Hunter et al		1		1
Magnolia Pet. Co.		2		2
K. E. Merren et al			1	1
Navarro Oil Co.		1		1
Roberts et al		1		1
Phares & Sample	1			1
Roeser-Pendleton, Inc., et al			1	1
C. Rosenfield et al		1		1
Sultan Oil Corp.		1		1
Paul Vitek et al		1		1
J. K. Wadley et al	1			1
P. H. Wilson et al		1		1
Ben Youngblood et al		1		1
Total	5	15	10	30
Total previous week	3	14	5	22

of possible oil producing territory from the Joiner via the Kilgore to the Longview field continues at a brisk pace. Funds to acquire protection leases, and for down payments to drilling contractors and supply houses continue to pour into the district.

Rusk County started the current week off with 134 operations, including 60 tests that had started drilling and 56 additional derricks and rigs. Gregg County likewise is recording a steady growth in field work, with 30 operations listed, including 10 tests under way, and 15 derricks and rigs.

Lower Tax Draws Louisiana Operators to East Texas

Shreveport.—The proximity of the new Longview-Kilgore-Joiner field of East Texas and its apparent large size, is attracting a large number of North Louisiana operators there with a consequent slowing down of operations particularly wildcatting in North Louisiana.

The high severance tax in North Louisiana where the levy is predicated on a gravity basis running as high as 11 cents per barrel on the higher grade oil, for example Cartersville, Bossier Parish, where oil of 43-44 gravity now bringing $1.07 per barrel on the market is required under the Louisiana severance tax to pay 11 cents per barrel, is sending many local operators into the new field. In Texas the severance tax is a flat two per cent of the value of the oil. The operators say they can operate with a much better return on their investment under the Texas severance levy even though proration is placed upon the new East Texas field.

Figures for a recent week show that in Bellevue, North Louisiana, where there is a daily average of 573 barrels of 18 to 21 gravity oil bringing a price of $1 per barrel, with a four-cent severance tax yielding an estimated severance tax per day of $22.92, the severance tax expressed in value of the oil is four per cent.

In Cartersville where for the same week there was a daily average yield of 1,947 barrels of 43-44 gravity oil bringing $1.07 the severance tax per barrel is 11 cents or an estimated daily severance tax for the week of $214.17 or a severance tax of 10.3 per cent expressed in percentage of value of the oil per barrel.

Caddo light oil which for the typical recent week had a daily average yield of 8092 barrels of 40 to 42.9 gravity oil bringing $1.07 per barrel paid a severance tax of ten cents per barrel or an estimated severance tax per day for the week of $809.20 or 9.3 per cent severance tax in percentage of the value of the oil per barrel.

Haynesville which has a daily average of 5000 barrels of 31 to 38 gravity oil whose average price is 89 cents per barrel pays a severance tax of eight cents or an estimated amount of severance tax of $800 per day for the typical week or nine per cent of the value of each barrel of oil. Urania which has a daily average of 4888 barrels of 19 to 22 gravity oil which brings 75 cents per barrel pays four cents a barrel severance tax or an estimated severance tax per day for a typical week of $195.52 or 5.3 per cent of the value of each barrel of oil for severance tax. These fields are typical North Louisiana areas, the same figures holding true for other districts.

If these fields were in Texas the severance tax for Bellevue for the same week would have been $11.56 per day for the same week on the oil produced as compared to $22.92 paid under Louisiana's severance tax.

Under Texas' severance tax Cartersville for the week paid a daily severance tax of $214.17. Under Louisiana's levy would have paid but $41.67 severance tax on the same oil. Under similar conditions Caddo Light oil would have paid but $173.17 as compared to $809.20 paid under the Louisiana severance tax.

Haynesville Tax High

Haynesville, had it been in Texas, on its daily severance tax would have paid $89 as compared to $400 which it did pay, under the Louisiana rate.

Urania under the Texas severance tax would have paid $73.32 per day on its yield for a typical week as compared to the $195.52 it paid to Louisiana.

Turning now to East Texas' latest three divisions of the Rusk-Gregg oil field it is seen that for the corresponding week under an estimated daily potential for Joiner where the gravity is 40 Beaume and the average price per barrel is 54 cents that the amount of severance tax per day for this recent week, paying two per cent of the value, amounts to $108, which, had Joiner been in Louisiana, would have been a severance tax daily of $1000. Estimating the daily average production of the Bateman-Crim well in Rusk County at 10,000 barrels of 40 gravity oil for which an average price of 69 cents is paid the severance tax for Texas was $138 as compared to $1000 had this well been in North Louisiana.

The Arkansas Fuel-Farrell et al's Lathrop No. 1, William Robinson Survey, Gregg County, Texas, estimated at 10,000 barrels daily for the same week of 40 gravity oil at the price of 79 cents yielded a daily severance tax of $158 while, had it been in Louisiana, the severance tax per day would have been $1000.

This situation is the more vital to North Louisiana due to the fact that a large per cent of the oil from the new East Texas field is being brought to Shreveport in tank cars and doubtless later it will be by pipe line for refinement.

The amount of severance tax in Texas on approximately 500,000 barrels of East Texas oil for Shreveport delivery at an average price of 50 cents per barrel would be one cent per barrel whereas the same grade of Louisiana oil delivered in Shreveport is 10 cents per barrel, or in other words the tax on operations in Louisiana is ten times what it is in East Texas, for production of oil of the same gravity. The levy of 10 cents by Louisiana for 41 gravity oil is equal to one-fifth the value of the oil produced in East Texas and is greater than the amount of royalty received by the landowner.

In the event the East Texas potential becomes as large as predicted by many and especially if no proration is imposed a price below present levels will probably result and the fixed severance tax on gravity in Louisiana will become even more burdensome.

The fact that Louisiana has no proration and contemplates none under a daily yield of 200,000 barrels, the average daily now being about 65,000 barrels, is little incentive to operators under the present severance tax. This explains why Zwolle, with its large potential production, has not attracted more out of the state operators from prorated states.

Red Crown Derrick & Equipment Company has been organized with headquarters at 325 Ricou-Brewster Building, Shreveport, Louisiana. H. D. Gray is president and general manager of the company, and J. G. Lucas is secretary-treasurer. This company is building a plant in Shreveport of approximately 100 tons per month capacity (steel) for taking care of the East Texas trade. The company is manufacturers of Red Crown derricks and Red Crown separators.

Joiner's Biggest Producer Resumes After Three Days Off

Tyler, Texas.—Natural flow was resumed on Geo. Anderson-Cox et al's Frederick 1, which holds the initial production record for the Joiner field, on February 22 after being off production three days. In making a comeback the well made 135 barrels per hour through 2½-inch tubing. It was making about 400 barrels of oil hourly when the flow ceased, probably because of bridge forming in liner. The owners were giving the well a test gauge for the benefit of prospective purchasers when the production failed, and the deal has been delayed. Plans are to produce between four and six thousand barrels daily, as a market is available for such quantities at 40 cents per barrel at the well.

Although water has not appeared in Arkansas Fuel Oil Company et al's discovery well on the Lathrop farm, Longview field, the temperature has remained at an abnormal level. This well produced 4700 barrels during February 23, with the oil showing a temperature of 98 degrees at the tank battery and 129 degrees at the well. During the same period Humble Oil & Refining Company allowed the first heavy oil production from the Crim discovery well of the Kilgore field, as a total of 2350 barrels was run to lease tanks. The latter has not announced price posting on this crude, while it is reported that Arkansas Fuel Oil Company is to pay royalty owners 47½ cents per barrel for the Gregg County oil.

Houston.—The second producer for Mykawa field, Harris County, has been assured with completion of Humble Oil & Refining Company's Gehring 1. This well started flowing by heads from 4904 feet, making 47 barrels of oil daily after 20 feet of six-inch screen had been set, the oil flowing through a one-half-inch choke.

The new producer is 100 feet from the south line and 125 feet from the east line of the W. J. Lovett Survey and is a west offset to Minnetex 4. First commercial production in the field came from Minnetex 3 which made 550 barrels of 30 gravity oil at 4825 feet. Besides the two oil producers, the field has one gas well, Irvin 2 of the Humble Oil & Refining Company, located in the Walker Survey, which was completed for 50,000,000 cubic feet of dry gas at 4190 feet.

Barber-Green Salesmen Hold Meeting at Aurora Plant

Barber-Greene Company held its annual sales conference January 8-10 at the company's plant at Aurora, Illinois, with 55 representatives from districts throughout the United States and Canada present. The meeting took the form of an instruction course with class room lectures and laboratory work. In the class room the men were addressed by H. H. Barber and W. B. Greene, president and vice president, respectively, and by other officers of the company, who outlined the policies and methods of the home plant. Guests of honor who addressed the assembly were J. W. O'Keefe, secretary of the Chicago association of credit men; H. J. Fauber, president of the Central West Engineers, Inc., of St. Louis, a company that has laid extensive pipe lines throughout Illinois, Indiana, and Missouri; and Mike Andrews, foreman second in charge of the concreting by conveyor of the Marshall Field merchandising mart, and more recently in charge of the same operations on the three million dollar American Can Company building in Chicago. Educational movies covering the methods of constructing black top road were secured from the United States government and shown to the Barber-Greene men. A demonstration of the black top road builder, a newly-designed machine for building finished bituminous road in one operation, was also given just before the machine was shipped in to St. Louis, where it appeared at the road show.

The laboratory work included a review of all the machines now produced by the Barber-Greene Company and many that will be introduced into their various fields in 1931. This part of the conference was held in plant No. 3, the assembly plant.

Expect Oil Production in Goliad County Test

San Antonio, Texas.—Showing 875 pounds pressure and some oil in three minutes on a drill stem test, Slick Estate's Allen 1, O. Marshall Survey, Goliad County, is expected to make a producer. It logged the sand from 4198 to 4212 feet. Casing has been set on top of the sand and preparations are being made to complete the test. The well is 1500 feet east and slightly south of the same operator's Poetter 1, which made 500 barrels initial from 4199-4213 feet recently, establishing first oil production in Goliad County. The second well's showing is considered even more promising than the original test.

To date there are no pipe line facilities for this pool, although an extension from one of the other pools in the area is expected to follow completion of the second well.

Tulsa.—Crane and Rankin's Adkins 1, NE NE SE Section 14-1n-9w, wildcat test about 10 miles northwest of Duncan, is being drilled deeper after finding a small amount of gas and fresh water in sands at 2880 to 2917 feet. This test is offset to the east by a deep dry hole and is only a short distance northeast of gas production.

Oberweyer and Taylor's Skelton 1, NE SW SW Section 32-1s-7w, wildcat test about five miles south of Duncan, is shut down at 1375 feet. Ross Southard et al's O. R. McKinney 1, NE NE NE Section 25-1n-8w, three miles northwest of Duncan, is shut down at 1063 feet. Junior Oil Company's A. M. Thompson 1, NE SW SE Section 1-1n-7w, four miles east and five north of Duncan, is still shut down awaiting orders. Total depth is 3325 feet.

Wichita, Kansas.—Lloyd Pickrell of Wichita, has been appointed state proration umpire to succeed Tom C. Johnson, resigned. Mr. Pickrell has been connected with Mr. Johnson for a number of years and will make his headquarters in the Johnson suite in the Fourth National Bank building. C. H. Cooper will be assistant to the umpire.

Tulsa.—O. V. Back is shut down waiting on cement to set in Wilmer Seay 6, NE SE SW Section 34-6s-5w, in the Oscar district in Jefferson County. Casing was cemented at 1497 feet to test 30 feet of sand topped at 1500 feet. Total depth is 1531 feet in shale.

South Texas Field Developments

EARL POST, *Staff Correspondent, San Antonio, Texas*

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Darst Creek Allowable Set at 90 Per Cent of Potential

Seguin, Texas.—Allowable production at Salt Flat field, Caldwell County, is restricted under new proration schedule to 16,000 barrels daily, or 90 per cent of the field's total potential of 17,770 barrels from 326 wells as determined by 24-hour gauges.

These figures are from the official proration schedule for the 90-day period February 17-May 18, as announced by Umpire H. H. Fitzpatrick.

Under the former 90-day schedule the field was credited with total potential of 19,153 barrels daily, based on average of 92 days gauge; and the allowable production was set at 15,333 barrels, or 80 per cent of the potential.

Following are totals by companies taken from the new proration schedule:

Company—	No. wells	Total potential	Daily allowance
Abercrombie & Harrison	5	138	124
Adams & Lyles	2	81	73
Cooke Finance Company	1	5	5
Cranfill-Reynolds Company	4	124	113
Eastland Oil Company	1	88	79
Forrest Oil Company	2	87	79
Golden West Oil Company	7	243	219
Gulf Production Company	61	2,840	2,557
Humble Oil & Refining Company	172	11,120	10,011
Nash, Windfohr & Perry	15	698	627
Shell Petroleum Corporation	35	1,666	1,500
Sun Oil Company	4	180	162
The Texas Company	9	204	184
Turman & Brown	2	152	137
M. K. Townes	5	139	125
Witherspoon Oil Company	1	5	5
Total	326	17,770	16,000

Persistence Rewarded With Second Duval County Well

San Antonio, Texas.—After several dry holes, operators apparently have been successful in getting production in a second well in the SRC pool, Duval County. S. R. & C. Oil Company and Vacuum Oil Company joint test, Duval County Ranch Company 3, cored the sand at 1725-31 feet, which showed a saturation.

The well is 300 feet northeast of Duval County Ranch Company 1, discovery well, which made an excellent producer slightly above the level of the third well. It is in the southwest corner of Section 293. Casing has been set just above the sand and the test will be drilled in within a few days.

S. R. & C. Oil Company and Vacuum Oil Company drilled a second well 600 feet southwest of the discovery, closing it down at 1906 feet as a failure. The Texas Company's Duval County Land Company 1, one-fourth mile east of the discovery, proved a failure after being carried down to 2300 feet.

On Section 102, Alexander Survey, in the northern part of Duval County, Al Buchanan's Welder-Wood, a wildcat, is in the process of completion. It recently showed oil in a sand topped at 1519 feet. A drill stem test showed 100 pounds pressure with five feet of oil and a little mud. Casing was set at 1510 feet. It is in the vicinity of Welder-Wood 1, which little more than one month ago made a small amount of oil in a sand at 1523 feet, but was abandoned after showing a large quantity of salt water.

Test Seeks to Connect Pettus Producing Spots

San Antonio, Texas.—The United Production Company will attempt to connect the production in the Ray-McKinney (discovery) and townsite pools at Pettus, Bee County, by Ray 31, which was swabbed on February 17. This well is the first to be drilled in this section of the field and should attract a great deal of interest.

The location is 2050 feet from the east line and 2200 feet from the south line of the George A. Kerr Survey.

The unproven section between these pools is about 3500 feet wide and has been considered as potential producing area, although no drilling has been done to prove this theory. The townsite is getting its production from about the same level as the discovery area, around 3900 feet.

After the opening of the Ray-McKinney pool early in 1930, the Cosden Oil Company drilled McKinney 1, 3½ miles to the west across the townsite, opening the Cosden extension pool. At that time, it was thought that the entire area was productive. Several wells drilled just west of the townsite exploded this theory by testing salt water, subsequently proving two separate pools in the Cosden and the discovery area. The new test will prove whether or not there is another dry spot in the field.

Nine hundred feet east of the United Production Company's Ray 26, east extension well of the discovery pool, this company was drilling Ray 34 at 2754 feet at last reports. Its completion as a producer will add three more locations to the proven area of the field.

Another important test in the Pettus district at this time is United Production Company's Ray 32, which tested salt water at 3692-3701 feet, same level as Ray 13, discovery well of north extension pool found production. Ray 13, originally producing 460 barrels, recently opened a new pool three miles due north of the main field. Ray 32 is to be drilled to the sand encountered at 3929 feet in Ray 30, one and one-half miles south on a line with the old field. Ray 30 cored a formation at 3943 feet, which indicated the fault. Although Ray 32 showed a steep subsurface dip from Ray

13, it is possible that it will find production at the lower level.

General wildcatting is showing an increase throughout Bee County, there being more locations recorded in scattered areas. Rowan & Hope have reached 1355 feet in Mrs. Fannie Goree, five miles west of Grayburg pool in Barton Survey. Less than two locations south and east of the Grayburg-Kimball discovery well, Mauldin and Fisher are preparing to spud in A. J. Kimball 1. Alexander et al's McFall, three miles south of Skidmore, is moving on materials, while Catlett and O'Neill's Miller 1, eight miles west of Beeville in the Ronald Hoskiss Survey, is still a location. Just south of the Pettus pool, J. S. Mauldin's Fee 1 is fishing for 10 joints of drill stem. The bottom of the hole is recorded as 3835 feet.

Refugio Well Makes Gasoline; Extension Test Holds Interest

San Antonio, Texas.—Refugio's unusually heavy drilling campaign continues to hold South Texas spotlight with more completions during the week. One wildcat, one mile from the proven area, is being closely watched as preparations are being made to drill in.

United Production Corporation's O'Brien 8 is making about 60 barrels of gasoline from a sand at 6447 to 6457 feet It has a pressure of 1950 pounds on a one-fourth-inch choke on the tubing and 2150 pounds on the same size choke on the casing. It likely will turn to oil as a number of other deep wells in the field have done. This company's Power 8 is a large gasser, which is showing 2000 pounds pressure on a one-fourth inch choke on the tubing. The sand is reported at 6445-56 feet.

Moody-Seagraves Producing Company's Heyser 1-B, at the tank farm, south of Refugio and one mile southeast of production, is drilling out plugs and its outcome should be known within a few days. It has 6⅝-inch casing set at 6446 feet and total depth 6463 feet. It is reported to have shown an excellent saturation and a producer is likely.

The wells in process of completion are as follows: Houston Oil Company's Helen Ryals 14, waiting on cement at 3664 feet; Heard 13, swabbing in, 3670-78 feet, showing some oil, 100 pounds pressure through one-half and three-sixteenths inch choke; Moody-Seagraves Producing Company's Strauch 1, block 64, swabbing in 6455-57 feet; St. Johns 1-B, drill out plugs at 5517 feet; O'Brien 1-B, drill out plugs at 6462 feet; O'Conner 6, preparing to set casing after coring sand at 6432-41 feet; United Production Corporation's Ryals 6, swabbing in at 3649-54 feet, showing considerable oil.

Muckelroy Pool Completes and Starts Three Tests During Week

San Antonio, Texas.—The Muckelroy pool, Zapata County, registered three new producers and the same number of locations during the past week. The new producers were one gas well and two pumping oil wells.

Grim and Yakey's Pedro de los Santos, Share 6, Fansler Partition, Comitas Grant, is making 15,000,000 cubic feet of gas with 500 pounds pressure from 1350 feet. Casing is set on top of the sand at 1347 feet.

In the extreme south end of the pool, Claypool and Nickson's Garza 2, offset to Garza 1, Block 11, subdivision of Zorro ranch, is making about 125 barrels on pump from 1390-97 feet. Casing is set on the caprock at 1389 feet. This is about 10 feet higher than the first well. On Block 10, in the south extension, W. R. Shankle's Garza 1, is in process of completion, having the sand at 1391-97 feet. Casing is set on top of the caprock at 1390 feet. It is being drilled in.

The other completion of the week was a 20-barrel pumper by S. R. & C. Oil Company in Trevino 14-A, which topped the sand at 1259 feet and drilled to a total depth of 1278 feet. Casing is set at 1254 feet.

Locations during the week included P. H. Meyers Trevino 1, Block 24, Survey 412; K. & P. Oil Company's Bustamante 4, Block 6, Share 5; S. R. & C. Oil Company's Montemayor 5-D, Block 8, Survey 64. The first two wells have spudded.

San Antonio, Texas.—The Texas Company succeeded in closing in McFadden 2, Victoria County, February 20, after it had run wild nearly a week. The well blew in unexpectedly during the early hours February 16, from 2000 feet and immediately became out of control.

The test is located 9150 feet south and 200 feet east at right angles from the northwest corner of the C. M. B. Hoyd Survey, four miles west of Lion Oil Refining Company's McFadden 1, Traviesa Survey, which opened a new area last summer when it produced 36,000,000 cubic feet from the 3700-foot level. The 2000-foot stratum discovered by The Texas Company is entirely new for this district and opens a second field.

There was 800 feet of open hole in The Texas Company well when it blew in, making an estimated 30,000,000 cubic feet of gas with about 4000 barrels of fresh water and no oil. There was no blowout preventer on the hole. Valves were swung onto the casing and drill stem and then closed to shut off the flow of gas.

United Gas Company's McFadden 3, 5700 feet east and slightly north of the Lion Oil Refining Company's McFadden 2, a 35,000,000-foot gasser, is to be spudded immediately. It is now being rigged up. The test is near the Guadalupe River and the Calhoun County line.

Real County Test Running Higher Than Kerr Discovery

San Antonio, Texas.—Evans & Sprinkle's Haby 1, Real County, encountered a gas-sand at 1149 feet February 17, which is believed to correspond with a stratum 200 feet deeper in Evans & Gant's Jeff Love 1, discovery well, seven miles to the northeast in Kerr County. The fact that formations apparently are running much higher in the Haby test has created a great deal of interest.

Haby 1, located in Section 175, A. B. & M. Survey, is now making hole at 1438 feet. It is due to get the first production found in the Love well within the next 1000 feet.

Continued pumping has increased the output slightly in the Jeff Love discovery well and at last reports it is making about 20 barrels of oil with about 250 barrels of water. It is still flowing a slight bit from around the casing.

Evans & Sprinkle's Marcus Auld, Section 15, Block D, H. E. & W. T. Survey, Real County, is the deepest test in the district at this time. It encountered a gas-sand at 2090-2100 feet, but is drilling ahead. Ten-inch casing is set in shale at 2030 feet.

Evans & Gant's Seifer and Mears 1, southwest corner Section 1605, Kerr County, will set 15½-inch casing around 300 feet. The well had a fishing job at this level.

Two wells are preparing to start. Minns et al (formerly Evans & Gant) J. E. Young et al, Section 28, Kerr County, is starting to rig up after being delayed on account of muddy roads, while Gant & Kilgore and Eastland Oil Company's Dan Auld, Section 23, is steaming up to start drilling.

Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

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Bayou La Fourche Dome Added to Productive Salt Domes

Houston.—Another salt dome field has been added to the list of producing areas on the Gulf Coast with completion last week of The Texas Company's Leesville 2 in La-Fourche Parish, southern Louisiana, about 45 miles south of New Orleans. The discovery well is located on the Leesville geophysical prospect, originally known as the Bayou LaFourche Dome.

The well came in from total depth of 3038 feet, flowing at the rate of 480 barrels daily through three-eighths-inch choke and registering 490 pounds pressure. Corrected gravity of the oil is approximately 20 degrees. Casing was set at 3000 feet and 45 feet of 4½-inch screen was set on bottom of the well.

Only one previous test has been drilled on this prospect, Leesville 1 of The Texas Company, which was abandoned in November, 1930, at 5660 feet. A slight odor of oil around 5275 feet was the only showing encountered in the drilling of the test. Leesville 2 is located on the southwest flank of the dome, 4396 feet and 705 feet east of the northwest corner of Section 26-21s-22e or 3628 feet south and 1473 feet east of Number 1. The nearest production to this new field is at Lake Barre which is about 14 miles to the west.

This discovery has been responsible for the signing of a contract for the drilling of a well to be started within 90 days on the 1280-acre tract which adjoins The Texas Company's lease. This tract, which is owned jointly by the City of New Orleans, Charity Hospital and Tulane University, has been leased to Gulf Refining Company.

Houston.—The fourth test to be completed on Garden Island dome, The Texas Company's Garden Island Bay 4, has been abandoned in sandy shale at 5618 feet. This test is located 2300 feet north and 1700 feet east of the southwest corner of Section 39-23s-33e, in Plaquemines Parish. No indications of oil were encountered in this well.

Shell Abandons Test on Top of Dome at White Castle

Houston.—Shell Petroleum Corporation has definitely abandoned Wilbert 5 in White Castle field, Iberville Parish, in salt at 5495 feet. Top of the salt was found at 5475 feet. The test is located 1122 feet west and 530 feet north of the southeast corner of fraction of Section 9-11s-12e, on the top of the dome and due east of the discovery well.

A blow-out occurred in the sand at 5210 feet after casing had been set for a test, and the well made approximately one-quarter of a million feet of gas daily for over 12 hours until it went dead, and it was then drilled deeper.

Among the five wells that have been completed at White Castle dome (all by Shell Petroleum Corporation) there have been two producers. The discovery well, Wilbert 3, located on the southwest flank of the dome in Section 8, was a small producer of 21 gravity oil at 5850 feet, while Wilbert 4, on the southeast flank in Section 1, came in flowing 50 barrels of 24 gravity oil per hour at 5175 feet.

The Texas Company Fails in Third Attempt in Louisiana

Houston.—The Texas Company failed in its third attempt to locate production at Bay Junop Dome in Terrebonne Parish, Louisiana, when it abandoned Bay Junop 2 early last week at 7030 feet. This test is 2210 feet north and 1285 feet west of the southeast corner of Section 21-21s-14e, on the north flank of the dome.

Two previous tests, Bay Junop 1 and Louisiana Land & Exploration-Bay Junop 1, were abandoned at respective depths of 4935 feet and 5090 feet. The latter was located on the east flank of the dome in Section 27, while Bay Junop 1 was drilled approximately on the top of the dome, in Section 28, going into cap rock a short distance below 5000 feet.

First Lost Lake Well Drills Into Salt and is Abandoned

Houston.—Efforts of Pure Oil Company to drill through a possible overhang of the dome and back into sedimentary formation, as in the case of operations at Barbers Hill, resulted in encountering salt in Lost Lake 5, in the Lost Lake field, Chambers County. This is the first well at Lost Lake ever to drill into salt, although several previous tests have penetrated relatively great thicknesses of cap rock. One well drilled through 750 feet of cap rock and was abandoned in that rock material.

After going into streaks of salt around 7300 feet Lost Lake 5 was finally abandoned last week at 7471 feet. This test is located on the west side of the field. The field has some oil production, which is found around 2800 feet.

Aransas Pass, Texas.—Plans for the building of two 80,000-barrel steel tanks at Harbor Island for Atlantic Pipe Line Company have been announced. The contractors have moved in teams and tools and are ready to begin grading work for the structures.

The Atlantic Pipe Line Company acquired tanker loading facilities at Harbor Island recently from Gulf Coast Pipe Line Company (Moody-Seagraves-Morgan) along with extensive storage and pipe lines out of Refugio field.

Drilling Again in Magnolia Crevice Well at Darst Creek

Luling, Texas.—Having twisted off drill stem on four separate occasions, Magnolia Petroleum Company's M. E. Roamell 1 was making new hole late last week below 2350 feet. This well was completed last March from crevice at 2317-22 feet on northwest flank of the Darst Creek field with record flow of 41,760 barrels daily, based on two-hour gauge, but exhausted its oil supply late in December. An attempt to deepen with cable tools failed, and repeated twist offs have occurred since changing to rotary. The last twist off took place at 2405½ feet, costing four joints of drill stem and the bit. In each instance the drill stem and bit have not been intercepted when new drill outfit put into service, while efforts to fill the crevice with mud and water also have failed.

Houston.—Completion of Mills Bennett Production Company's Smith 1 last week further outlined production on the west side of the Barbers Hill dome when the well came in flowing 375 barrels of 31 gravity oil from 5573 feet. Temperature of the oil was 90 degrees and pressure registered 75 pounds. Sixty-nine feet of screen was set in the sand at total depth of the well. The well is now swabbing sand and oil.

This producer is located on the west side of the field, 50 feet out of the southeast corner of Gulf Production Company's 50-acre tract and is a northwest offset to Sinclair Oil & Gas Company's Smith 2 which was completed in December, 1930, for 800 barrels from 5670 feet.

Tulsa.—C. V. Chenault et al are drilling below 200 feet in Grogan 1, CNL NE SW SW Section 24-7s-6w, near the old Humble field in southern Jefferson County. The same operators will drill two other tests on the Grogan ranch, locations having been announced in NE SW NW Section 23 and SE NE SE Section 15, both in Township 7s, Range 6w.

Mississippi Wildcat Having Gas Show Makes Flow of Water

Jackson, Mississippi.—Carter Oil Company and associates' Dubard 1, NW NW Section 18-22n-4e, Grenada County, Mississippi, a wildcat that had shown considerable gas in the Tuscaloosa at 2966 feet, failed to show anything except artesian water when a drill stem test was made last week from 2966 to 2974 feet and a core was then taken from 2974 to 2989 feet when three feet of gray water sand with some shale was recovered. The test is being deepened. However ratholing and coring ahead will be the practice hereafter which had not been the case when the gas show was encountered. The belief that the pressure behind the gas show was hydrostatic from an artesian flow encountered higher up seems to have been the correct theory.

It is reported that W. L. Wood, said to be a land man for Magnolia Petroleum Company out of Dallas, acquired between 900 and 1000 acres in the vicinity of the block on which the Dubard test is being drilled.

Collins and associates, during the last week, abandoned Carter 1, SE SE Section 29-11n-12e, Neshoba County, 65 miles east of here, as a dry hole in Selma chalk at 2053 feet. Selma chalk was topped at 1620 feet, elevation being 456 feet. The log indicated that the formations were running normal with the regional dip and that there was no structure.

Gulf Refining Company's School Board 1, NE SW Section 16-6-1e, Hinds County, two miles north of the northwest corner of the Jackson gas field is checking approximately 150 feet low as to encountering the Midway black shale. Late last week the test, which has elevation of 331 feet, was still drilling in the Wilcox formation at 2556 feet. The same company, using 350 sacks of cement has cemented bottom of the hole in McLaurin 1, SW NE Section 30-6-2e, Hinds County, over a mile northeast of gas production, to regain lost returns which were lost in the Midway chalk at total depth of 2646 feet, chalk having been topped at 2485 feet.

Central Oil & Gas Company's Cameron 1, SE SE Section 11-9n-1e, 18 miles north of Jackson gas production, and in Madison County, may have topped the Midway formation at 2506 feet, cores at that depth indicating this. Late last week the test was drilling sandy shale at 2800 feet. This test was spudded for a 4000-foot hole.

Shell Reported Investigating Southwest Mississippi Acreage

Jackson, Mississippi.—Gulf Refining Company, during the week ending February 21, started moving in rig from its abandoned Hamilton 1, in Rankin County, to a new location in Clarke County, east central Mississippi, near the town of Quitman. The new test is Box 1, NW SE Section 11-2n-15e. Elevation of the location is 221.2 feet.

This test is on a large tract of acreage, part of which was taken under option last fall just before a score of core drill tests were made, and recently acquired tracts that appeared desirable after the series of core drill operations was completed.

Another interesting wildcat started during the past week was that of Pocahontas Natural Gas Company (Missouri-Kansas) in Smith County, south central Mississippi, 35 miles west of Laurel. The new location where rigging up is already under way is Adams-Banks Lumber Company 1, NE SW NW Section 10-3n-7e, elevation being 425 feet.

In Covington County, the adjoining county to the west, United Production Corporation is fishing for frozen drill stem in McIntosh 1, NE SW NE Section 5-8n-16w. It is reported that Gulf Refining Company may take over Mississippi Gulf Oil & Gas Company's Pope 1, NW NE Section 35-8n-16w, in the same county, which has been shut down for several weeks at 3000 feet.

Although no efforts are reported to secure acreage at this time, Shell Petroleum Corporation has a force of 15 men working in Wilkinson County, southwest Mississippi, where Humble Oil & Refining Company has a block of 110,000 acres and A. C. Glassell and associates have large blocks. Two of the crew are said to be magnetometer operators while several of the others are doing mapping and detail work and some of the party are scouts and land men. A Shell party recently worked in Amite County and other areas adjacent to Wilkinson County.

Shreveport.—Plans for the 1931 field trip of the Shreveport Geological Society, which embraces in its membership petroleum geologists in North Louisiana, Arkansas, and East Texas, will be mapped at a meeting of the society in Shreveport on the evening of March 6, according to S. C. Stathers, chief geologist for Standard Oil Company of Louisiana. The field trip is made each summer. Raymond E. Heithecker, in charge of the Shreveport office of the United States Bureau of Mines, will lead an open discussion at the March 6 meeting on the Zwolle oil field.

Louisiana--Arkansas Field Notes

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Formations Checking Higher Southwest of Zwolle Field

Shreveport.—Checking more than 150 feet higher than wells in the Zwolle townsite, Frank Buttram and associates' Hale 1, NE NE Section 1-7-13, Sabine Parish, a half mile southwest of Zwolle production in the townsite area, topped Zwolle marl at 2066 feet during the week ending February 21. Six and five-eighths-inch casing is being set, total depth being 2074 feet. This development may or may not be significant for highs and lows in the Zwolle marl and chalk count for but little in getting production in that field, previous developments have shown. Hale 1 is between the townsite producing area and the original West Zwolle (Blue Lake) field, nine miles to the southwest.

Only one new location was made in Zwolle during the week, this being Ohio Oil Company's Bowman-Hicks 7, Section 2-7-12, in the south extension of the east field. Ohio Oil Company added the only producer on that field during the week, Brown 1, Section 33-8-12, in the so-called proven part of the field. It is pumping 50 barrels from chalk at total depth of 2535 feet.

Magnolia Petroleum Company's Lucius 1, NW NE Section 2-5n-12w, south Sabine Parish, has a fishing job at 3855 feet. Another wildcat in Section 4-5-13 of the same parish, Wilson and Sons' Gandry-Garrett 1, has been temporarily abandoned at 2509 feet.

Jamestown Syndicate's Lawhon 1, SW NE Section 15-16-8w, a wildcat in Bienville Parish, which encountered considerable gas in a sandy shale formation in the Tokio at 2860 feet is shut down waiting on casing.

Plan Test to 5500 Feet Near Shreveport in Caddo Parish

Shreveport.—Garry M. Gordon of New York, during the week ending February 21, completed a block of 3000 acres in southwest Caddo Parish, starting just outside the Shreveport city limits, and announced plans for a 5500-foot test. Location has already been made in Hatcher 1, NE NW Section 11-17-15w. This part of the Sabine uplift has never had a test of that depth, the nearest operations to that level to the new operation being in the Rodessa gas field of northwest Caddo Parish, more than 30 miles away, where gas in the upper Trinity is found at 5500 feet.

Louisiana Oil Refining Corporation drilling a 4500-foot test in the old shallow Homer field of Claiborne Parish late last week was drilling hard shale at 4035 feet. Arkansas Fuel Oil Company is drilling hard lime at 2005 feet in Alexander 1, Section 47-8-9e, Concordia Parish, a wildcat, after testing salt water from 1975 to 1983 feet. Gulf Refining Company late in the week was reaming at 3556 feet in a wildcat in Natchitoches Parish, Bodcaw Lumber Company 1, SW NE Section 13-13-8w.

Ouachita Natural Oil & Gas Company completed Smith 1, SW NE Section 36-20-2e, a wildcat in Union Parish, at total depth of 2308 feet, gauging 176,000 feet of dry gas with rock pressure of 875 pounds. Six-inch casing was set at 2101 feet.

H. I. Morgan and associates abandoned another test to the upper Trinity on the southwest flank of the old shallow Bellevue field of Bossier Parish, abandoning Kendricks B-12, Section 22-19-11, as dry at 2050 feet, 200 feet below the gas pay of the upper Trinity there.

Another test attempting to extend the lenticular Woodbine sand field of Holly, De Soto Parish, was a failure, C. D. Neff and associates abandoning Dowling 1, SE SE Section 18-13-14, as dry at total depth of 3180 feet in lime. The test was seven miles west of the main part of production.

Two new locations were made in the Richland gas field, which also added a gasser. One new location was made in Zwolle, Sabine Parish, and on the Elm Grove gas field of Bossier Parish.

Arkansas Completions Include Failure and One Small Well

Shreveport. — Buck Oil Company abandoned Taafe 1, Section 25-12-32, a wildcat in Little River County, Arkansas, during the past week as a salt water hole at 2919 feet. The test had shown a small amount of gas with much salt water in a drill stem test from 2770 to bottom of the hole.

This failure with completion of a 40-barrel pumper in the Stephens townsite in an extension of the Stephens field, comprised the entire list of completions for the week in Arkansas. The extension pumper in Stephens is J. D. Reynolds' Pace 1, NE SE Section 21-15-19. The oil is free of water. Total depth is 2204 feet. There were no new locations in Arkansas during the week.

Smitherman and McDonald late last week were clearing titles before drilling plug in Reed 1, SE NW NW Section 16-15-22, a wildcat in LaFayette County, that recently showed heavy oil in three joints of mud in a drill stem test from 1172-94 feet. Eight and a quarter-inch casing was set at 1176 feet.

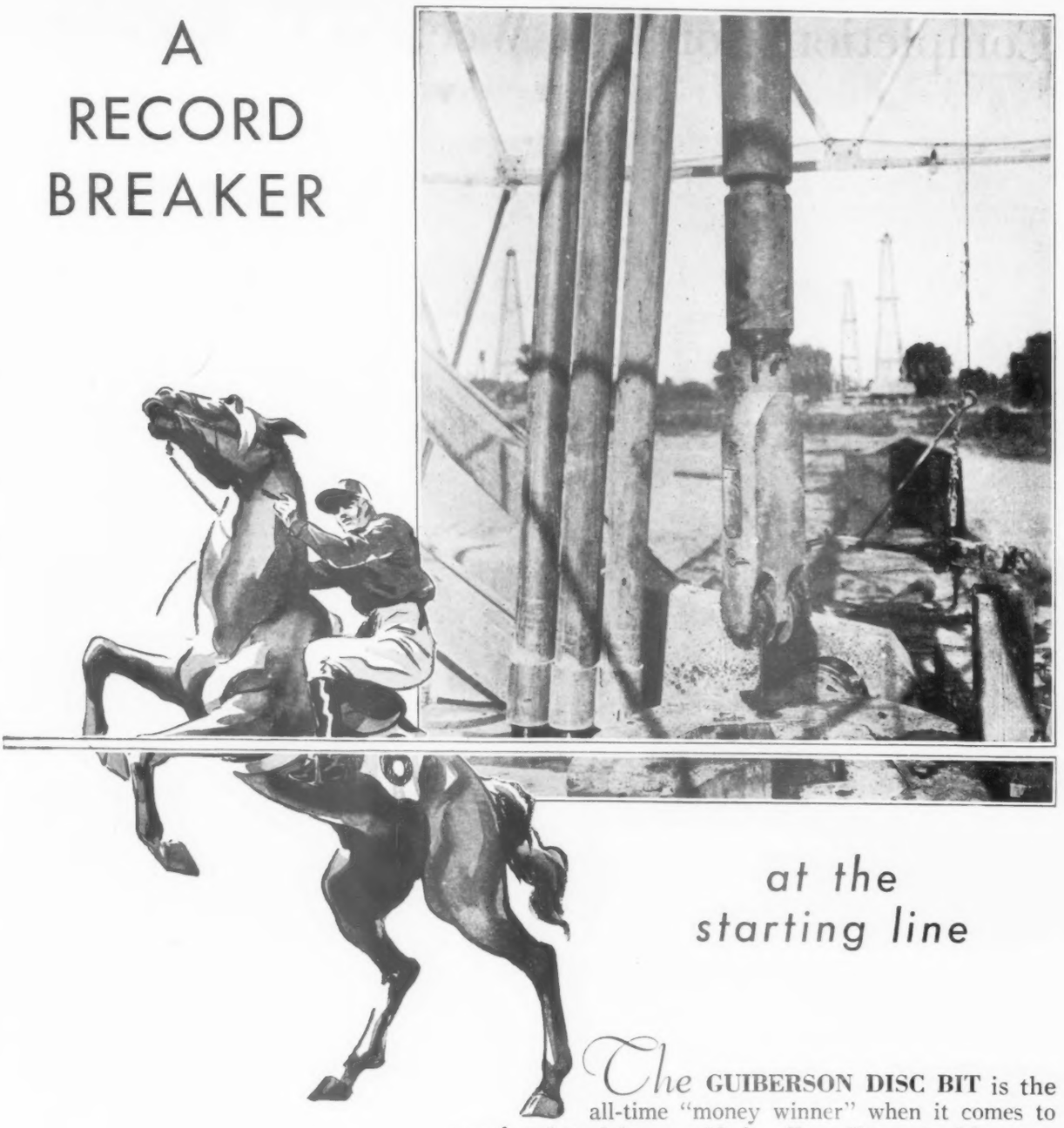
Lenz and associates apparently will make a deep test of Johnson 2, Section 24-15-26, Miller County, late last week being engaged in coring at 4615 feet. Southern Production Company which set 10-inch at 210 feet in Wingfield 1, SE NW Section 16-19-15, Union County, for a 4000 to 5000-foot test, and then shut down, have skidded 26 feet east for a new hole.

Lake Charles, La.—Having purchased the local gas plant and distribution system from Gulf States Utilities Company, United Gas Public Service Company, unit of United Gas System, will make this city headquarters of the entire division to be served by the new pipe line that is under construction in Southwest Louisiana. D. S. McManus, division manager, already has headquarters here.

United Gas Public Service Company has obtained franchises in 38 Louisiana communities, and is at work on construction of a natural gas pipe line project from Kirbyville, Texas, to Franklin, Louisiana, a distance of 158 miles for the trunk line, with 265 miles of laterals to branch out from the main line.

The Lake Charles system will be taken over officially when natural gas is available for distribution throughout the city about July 1. The United Gas System plans to enlarge the system at Lake Charles at cost of approximately $100,000.

A RECORD BREAKER



at the starting line

The **GUIBERSON DISC BIT** is the all-time "money winner" when it comes to speed and straightness of hole. Four discs cut with amazing rapidity. Reamers in side plates keep hole reamed full size. Water flush holes extend to bottom of bit. Although not intended as a hard rock bit, the Guiberson Disc Bit will cut through intervening shells, obviating the necessity of pulling out to change bits.

The Guiberson Disc Bit in the picture, taken in the Oklahoma City field, holds enviable records for speed, straightness and low cost per foot of hole drilled. *Fully patented.*

"Better Be Safe Than Sorry"
The GUIBERSON CORPORATION
Box 1106, Dallas, Texas
California Branch: 1506 Santa Fe Ave., Los Angeles
621 Kennedy Bldg., Tulsa — 321 S. Osage Ave., Ponca City — 506 Trust Bldg., Newark, O.

GUIBERSON

BETTER BE SAFE THAN SORRY

Completions for Past Week in U. S. Fields

▼ ▼ ▼

For Tabulation and Comparison See Market Section

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
ATHENS-ROSECRANS—		
Union Oil Co., Howard Park 10 ..	40	5710
LONG BEACH—		
Dabney-Johnston Corp., No. 80	200	8415
Enid Oil Co. No. 1	125	4835
Otis Hoyt, No. 13	1800	5700
J. E. O'Donnell, Jante 1	25	7955
Plymouth Pet. Co., No. 10	400	6960
PLAYA DEL REY—		
The Ohio Oil Co., Gun Club 9....	300	3890
Union Oil Co., Del Rey 2	600	5740
Townsite 6	600	5900
VENTURA AVENUE—		
Associated Oil Co., Hartman 15 ...	200	7215

KANSAS

BUTLER COUNTY—		
Magnolia Pet. Co., Stone 6, (owd) nw ne sw 2-25-5e	250	2457
CHASE COUNTY—		
Granner, Fowler et al, Carson 1, ne c 9-21-7e	*	3210
GREENWOOD COUNTY—		
W. C. McBride, Inc., Good 1, c se sw, 3-28-11e	*	1145
KINGMAN COUNTY—		
Aladdin Pet. Co., Shrag 1 sw c nw 16-27-5w	*	4305
KIOWA COUNTY—		
Phillips Pet. and Prairie, Bean 1 ne c se 10-30-17w	*	5386
McPHERSON COUNTY—		
Washoma Pet. and Shell, Meeks 1, nw ne sw 7-20-1w	920	2966
United Pet. Co., Shell and Sinclair, Kaegi 1, ne c 20-19-1w .....¶14¼		2912
PRATT COUNTY—		
Wilcox O&G, Batten 1, sw c nw 7-26-15w	*	4924
SEDGWICK COUNTY—		
National Refg. Co. et al, Murdock 3, ne se se 18-27-2e	300	2954
Joe Liggett et al, Loper 1, nw c sw se 4-25-1w	*	3744
STEVENS COUNTY—		
Texas Interstate Pipe Line Co. and McNabb-Bess Oil Co., Rinehart 1, se nw ne 23-32-39w	¶6	2349

OKLAHOMA

LATIMER COUNTY—		
Mid Western O&G, Dennis 1, c se nw 15-6-21e .....¶1½		1625
MUSKOGEE COUNTY—		
Harry Smith, Pouncil 9, se c nw se ne 25-15-15e	¶1	1318
H. L. Jolly, Rentie 2, se c sw sw nw 9-15-18e .....¶1½		1593
OKFUSKEE COUNTY—		
Papoose Oil Co., McNac 6, (owd) cnl nw se 25-11-11e.....	¶6	3420
Eagle Picher Lead Co., Tiger 3, (owd) se c 35-11-11e	¶4	2795
OKLAHOMA COUNTY—		
Cromwell-Franklin Oil Co., Tresper Park 32, ne se ne 14-11-3w....¶57-455		6195
Sunray Oil Co., Twyford-Smith 1, ne c se se nw 10-11-3w 8160		6310
Phillips Pet. Co., Herchek 1, sw c se se nw 10-11-3w 8380		6312
Mabee Drlg. Co. and Tidal Oil, Reynolds 1, c s½ ne nw 10-11-3w....9495		6342
Dengail Oil Co., Woodson 1, nw c se ne 10-11-3w 6380		6385
Century Pet. Co., Wheeler School 1, nw c sw nw sw 10-11-3w 15,275		6320
Anderson-Prichard and Phillips, Hathaway 1, sw c se nw ne 10-11-3w 6265		6297
Phillips Pet. Co., Walnut Grove 1, se c ne nw ne 3-11-3w 10,550		6287
Slick Estate and Phillips, Owens 1, nw se ne 3-11-3w 8360		6230
R. A. McArthur, Armour 1, cwl sw nw nw 2-11-3w 20,770		6257

Company, Well and Location	Initial Production Bbls.	Depth
OKMULGEE COUNTY—		
Mack Drlg. Co., Cumsey 3, sw c se se 36-13-13e	*	2808
Dempsey & Wise, Webster 1, se c sw ne 3-12-12e	*	3244
PITTSBURG COUNTY—		
Choctaw Gas Co., Hayhurst 3, nw c ne 16-7-18e .....¶3½		1860
PONTOTOC COUNTY—		
Empire Gas & Fuel Co., Williams 1, sw c nw 7-4n-8e	45	1933
Sunray Oil Co., Ritchey 10, se ne ne 12-4-7e	400	1950
SEMINOLE COUNTY—		
Gypsy Oil Co., Coker 6, sw nw sw 2-8-5e 1100		4131
Magnolia Pet. Co., Hyde-Swan 1, nw sw se 29-6-6e	*	2841
WAGONER COUNTY—		
Cooper and Crow, Prince 1, sw c se se sw 3-16-16e	¶1	1503

EASTERN STATES

PENNSYLVANIA

BEAVER COUNTY—		
Hobbs Oil Co., McCoy 1	1	1465
BUTLER COUNTY—		
Porter Bros. Jennings 8	¶½	....
W. O. McCullough, Kayler 3	¶½	....
Miller & Co., Miller 1	*	....
BRADFORD COUNTY—		
Ryan & Co., O'Neil 1	8	....
Ajax Oil Co., Ajax 1	3	....
M. J. Franks, Franks 1	4	....
WASHINGTON COUNTY—		
H. V. Sprouls & Co., Montgomery 3	5	....
GREENE COUNTY—		
Greene County Oil & Gas Co., Henderson 1	¶¼	3374
Manufacturers Light & Heat Co., Orndoff 1	¶¼	2534
Natural Gas Co. of West Virginia, Parsons 2	*	2958
CLARION-VENANGO COUNTIES—		
Swartzfager Co., Geughler 2	¶¼	....
Wedekind & Co., Rowan 2	*	....
Slicek & Co., Slicker 1	2	....

CENTRAL OHIO

LORAIN COUNTY—		
Ohio Fuel Gas Co., Zumginsky 1..	¶4	....
Stoney Ridge Oil & Gas Co., Myers 2	*	2401
ASHLAND COUNTY—		
Ohio Fuel Gas Co., Whitemire 1 ..	¶¼	....
Robinson & Co., Easely 4	2	665
ATHENS COUNTY—		
Noah Andrews, Contner 1	¶¼	3484
BELMONT COUNTY—		
W. C. McBride, Inc., Hadsell 3 ...	¶½	1408
Washmuth & Callahan, Huntsman 2	¶¼	1840
GEAUGA COUNTY—		
Wittmer Properties Trus., Miller 1	*	....
HOLMES COUNTY—		
Arkansas Fuel Oil Co., Patterson 4 .....¶¼-25		3585
KNOX COUNTY—		
Ohio Fuel Gas Co., Rogers 2	¶½	2956
MUSKINGUM COUNTY—		
The Pure Oil Co., McKee 5	204	3125
MEDINA COUNTY—		
Edson Sons Co., G. W. Packard 13	*	322
PERRY COUNTY—		
The Wehrle Co., Hammond 1	*	3399
STARK COUNTY—		
Wittmer Oil & Gas Co., Kingsbury 1 .....¶3¼		4185
SUMMITT COUNTY—		
Smith & Co., Smith 2	¶1	3495

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
JEFFERSON COUNTY—		
Sanders Oil Co., Shaphn 2	*	1400
Elliott & Co., Lemon 1	*	1250
William Graham & Co., Green 1 ..	1	1300
MORGAN COUNTY—		
Kemrow Co., Huffman 5	¶¼	1462
MONROE COUNTY—		
Gold Crown Oil & Gas Co., Edington 4	¶¼	1910

NORTHWESTERN OHIO

SENECA COUNTY—		
Lang & Co., Martin 1	*	1700

INDIANA

MADISON COUNTY—		
Pendleton Natural Gas Co., Cox 1..	¶½	....
Cox 2	¶½	....
PIKE COUNTY—		
James E. Young, Stansel 1	*	....
V. E. Bolynard & Co., Heacock 1..	*	....
PERRY COUNTY—		
Roger E. Williams & Co., Backer 3	*	....
SULLIVAN COUNTY—		
H. Huntsman & Co., Piety 1	¶¼	....
Fred Bays, Jewell 1	¶¼	....
VIGO COUNTY—		
James C. Ellis & Co., Clay Ladd (Riggs) 1	100	2207
VANDEBURG COUNTY—		
Vandeburg Oil Corp., Poor Farm 1	5	....

ILLINOIS

ST. CLAIR COUNTY—		
Kroeger & Co., Metter 2	4	794
MONROE COUNTY—		
T. J. Collins, Siebilt 1	*	985

MICHIGAN

ISABELLA COUNTY—		
Wittmer Oil & Gas Co., McKenzie 1	500	....
Goll, Graves & Meckling, Mumy 1	65	3584
Geneva Oil Co., Nicholson 1	*	....
MECOSTA COUNTY—		
Remus Oil Corp., Bauman 1	*	....
Benedum-Trees Co., Brand 1	*	....
OCEANA COUNTY—		
C. J. Sipple, Fruitvale Land Co. 1	10	1960

NEW YORK

ALLEGANY COUNTY—		
Shaner & Co., Coast 1	4	....
J. H. Brabaney, Van Camp 1.....	2	....

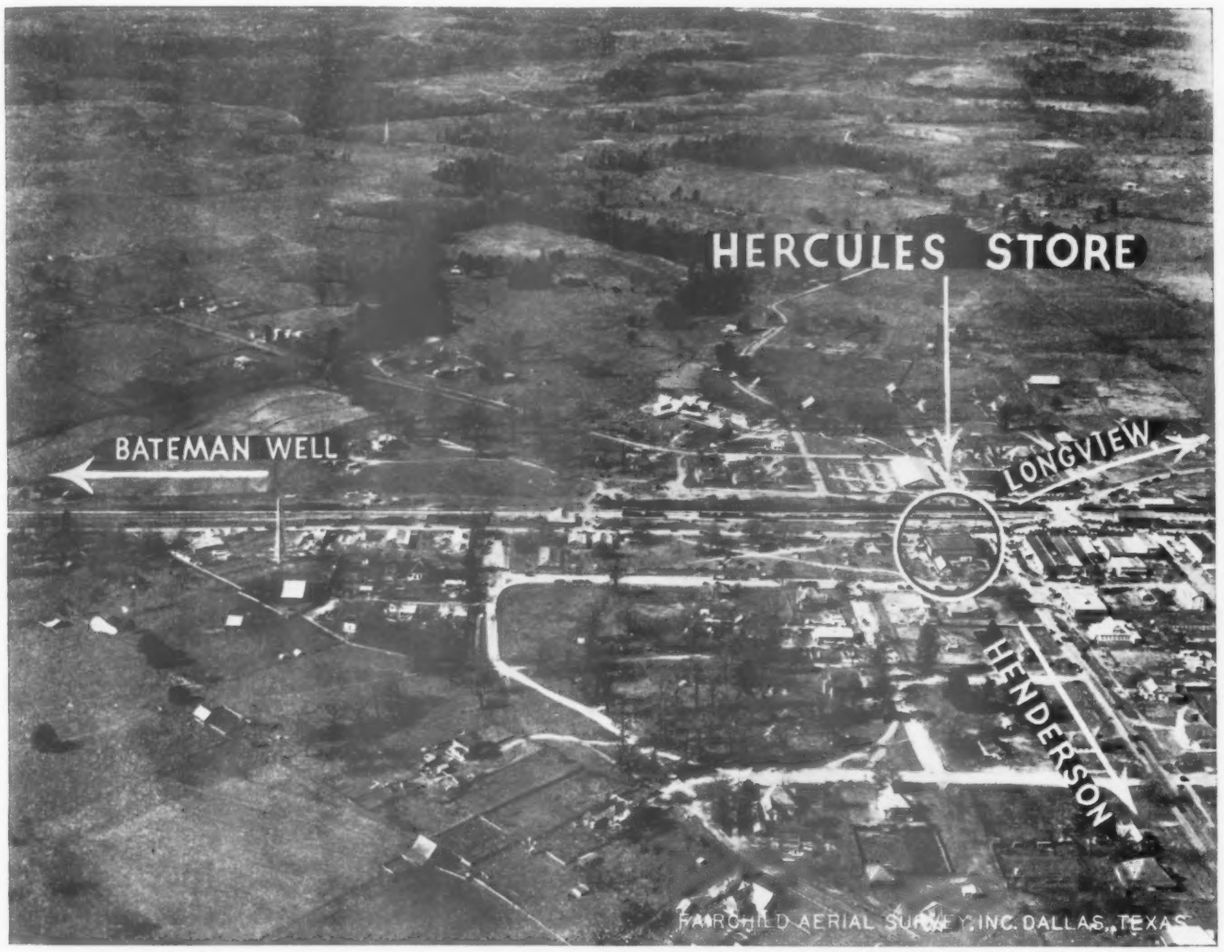
WEST VIRGINIA

CALHOUN COUNTY—		
W. H. Bickel, Bunnell 1	¶½	1931
C. B. Lewis & Co., Calhoun Poor Farm 1	¶¼	1883
G. L. Cabot, Inc., Little 1	¶1	....
F. F. McIntosh, Hardman 3 .....¶1½		1680
BOONE COUNTY—		
G. L. Cabot, Inc., Federal Coal Co. 42	¶¼	3320
Dickinson 1 .....¶3¼		1984
MONONGALIA COUNTY—		
Duquesne Gas Co., Six 1	¶½	2671
Pittsburg & West Virginia Gas Co., Johnson 1	¶¼	3250
RITCHIE COUNTY—		
Paul Weekly & Co., Sargent 1	*	....
Richards & Co., Kibble 1	*	....
MARSHALL COUNTY—		
Manufacturers Light & Heat Co., Miller 1 .....¶1½		2667
MARION COUNTY—		
Sutton Bros., Thomas 2	¶½	2215
DODDRIDGE COUNTY—		
Wilson & Bradwater, Cox 1	¶½	1810

KENTUCKY

HANCOCK COUNTY—		
D. T. Bolling & Co., Crowe 4	150	550
James C. Ellis & Co., Richards 5 ..	20	430
WARREN COUNTY—		
Shriver & Co., Madison 1	*	600
Julian & Co., Reesel 3	*	500

Hercules First Supply Company To Have Stock in KILGORE



The above photograph shows the accessibility of this store to the field operations at Kilgore

Acting with its usual speed to meet oil field conditions, the Hercules Supply Company has made supplies immediately available to operators in the East Texas field by establishing a store at Kilgore. This store is fully stocked to meet all requirements.

Deliveries from this point can be made within the hour to any of the wells in the Joiner-Henderson and Lathrop-Longview territories.

HERCULES SUPPLY COMPANY

J·T·McCARTHY JR

EVERYTHING FOR OIL WELLS

Spang Jars
Worthington Pumps
B-J Elevators and Tongs
Regan Control Heads, etc.
Standard Seamless and Etna Pipe
Cameron Blow-Out Preventers, etc.
Fishing Tools, both Rotary and Cable
American Steel & Wire Co., Wire Lines
"Lucey," "Dreadnaught," "Regan" Rotary Tools

Gray Tools
Climax Engines
Baker Oil Tool Products
Walworth Valves, Fittings
Penberthy and Chicago Injectors
American Bull Ropes and Cat Lines
Oil W. Imp. Control and Oil Savers
Guiberson Tubing Catchers, Swabs, etc.
Hughes Rock Bits, Gate Valves, Core Barrels

General Office: FORT WORTH

Branches and Stores—Kilgore, Texas; Van, Texas; Pettus, Texas; Refugio, Texas; Arno (Portersville), Texas; Vernon (Grayback), Texas; Wink (Pyote), Texas; Longview, Texas; Hobbs, New Mexico.

SOUTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
REFUGIO COUNTY—		
United Prod. Corp.'s Power 8	¶40	6456
O'Brien 8	60	6457
VICTORIA COUNTY—		
The Texas Co.'s McFadden 2	¶30	2000
WILLIAMSON COUNTY—		
Marts & Ertel Abbott	200	....
WEBB COUNTY—		
O. W. Killam's Cuellar 3	*	2353
ZAPATA COUNTY—		
Claypool & Nickson's Garza 2	125	1388
Grim & Yakey's de los Santos 1	¶15	1350
S. R. & C. Oil Co.'s Trevino 14-A	20	1278

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
RICHLAND PARISH—		
W. C. Feazel, Simon 1, 11-16-6e	¶39	2400
SABINE PARISH (Zwolle)—		
Ohio Oil Co., Brown 1, 33-8-12	50	2535

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BARBERS HILL—		
Mills Bennett Prod. Co., Smith 1	374	5573
HULL—		
J. F. Bashara, Bashara 2	125	4250
HUMBLE—		
Sun Oil Co., Bender 19	*	4808
LOST LAKE—		
Pure Oil Co., Lost Lake 5	*	7471
MYKAWA—		
Humble O&R Co., Gehring 1	41	4904
ORANGE—		
Sinclair O&G Co., Granger 5, dd	30	3650
PIERCE JUNCTION—		
Navarro Oil Co., Perry 2	840	4350
RACCOON BEND—		
Humble O&R Co., Muellar 9	442	3510
SARATOGA—		
Rio Bravo Oil Co., Cotton 110-A	50	500
SPINDLE TOP—		
Yount-Lee Oil Co., McFadden 113, dd	120	4300

PORTABLE WAREHOUSES
---are economical!

Warehouses that can be moved from one location to another with 95% salvage are a genuine help to economical operation. So simplified is the construction of Houston Sectional buildings that in times of stress, your own crews can do the dismantling and erection.

The rigid construction of each section not only assures great strength to the whole building but makes re-erection simple and easy. These warehouses are so constructed that they may be enlarged at any time without disturbing the original structure.

You should have a copy of our catalog. If among its 1000 plans you fail to find the type of building you want or need we will construct one from your own plans and specifications.

HOUSTON READY-CUT HOUSE CO.

Successors to CRAIN READY-CUT HOUSE CO.

HOUSTON, TEXAS

LOUISIANA GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BAY JUNOP DOME—		
The Texas Co., Bay Junop 2	*	7034
EDGERLY—		
Rex. Pet. Co., Hunter 8, dd	400	3500
HAGER DOME—		
The Texas Co., St. Martin Land Co. 4	*	....
LA FOURCHE PARISH—		
The Texas Co. ,Leesville 2	480	3038
LOCKPORT—		
Union Sulphur Co., Moss 2	412	5656
WHITE CASTLE—		
Shell Pet. Corp., Wilbert 5	*	5497

TEXAS PANHANDLE

Company, Well and Location	Initial Production Bbls.	Depth
GRAY COUNTY—		
Danciger O&R Co., Jackson 8-A	25	3242
Empire Gas & Fuel Co., Roscoe 1	¶27	2883

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
Bridwell Oil Co., Green 3	55	1129
Dean Bros. et al, Andrews 1	*	1029
Fain-McGaha Oil Corp., Ikard 1	*	1240
COOKE COUNTY—		
Gose-Harvey et al, Jacobs 2	10	1582
JACK COUNTY—		
Brazos River Gas Co., Clayton 1-B	¶3	3001
WICHITA COUNTY—		
C. W. Clark et al, Allen-Kemp 1-B	50	1248
Tom Hunter Oil Corp., American Ref. fee 3	35	1246
Swanner et al, Parker 2-B	35	1284
The Texas Co., Waggoner 395	50	1526
NORTH YOUNG COUNTY—		
B. C. Banner et al, Belknap 1-C	*	722
O. Bratcher et al, Cullers 7	10	575
Christie Bros. et al, Watson 1	*	670
J. P. Coleman et al, Foster 1	*	550
Consolidated Oil Co. et al, Greer 1	*	1096
Roy L. Crawford et al, Garrett 1	*	1502
Deep Oil Dev. Co., Lowe 1	*	742
F-H-E Oil Co., Finch 7-C	30	677
Kleiner & Riggs, Larimore 5	60	720
Producers Tool & Supply Co. et al, Finch 3	70	630
Stastny et al, Eichelberger (Sec. 1453) 1	*	928
The Texas Co. & Jas. McKanna, Finch 3-A	150	676
Williams et al, Helton 1	*	1205

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
CALLAHAN COUNTY—		
Humble & Production Pur. Co., Dyer 2	15	1010
COMANCHE COUNTY—		
Fain et al, White 1	*	755
EASTLAND COUNTY—		
Ed. Keough et al, Jones 3	¶¼-60	3540
Mays et al, Brashear 3	*	1508
Lone Star Gasoline Co., Alexander 2	¶½	3939
SHACKELFORD COUNTY—		
Graham & Lash, Sedwick 1	*	565
STEPHENS COUNTY—		
Lyman et al, Parks 1	¶¾-15	2261

WEST TEXAS

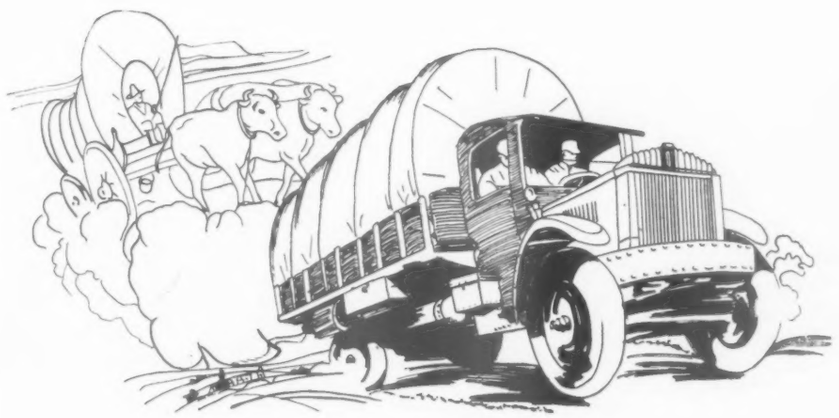
Company, Well and Location	Initial Production Bbls.	Depth
CRANE COUNTY—		
Gulf Prod. Co., J. T. McElroy 88	300	2983
FISHER COUNTY—		
Roeser-Pendleton, Inc. et al, Littleton 1	*	3218
LOVING COUNTY—		
Atlantic Oil Prod. Co. & Carl Cromwell, Russell 1	450	4247
UPTON COUNTY—		
C. F. Corzelius et al, Shirk-Tidal 1	*	2745
TP Coal & Oil Co., King 1	10	2815
WARD COUNTY—		
Rickford & Smith, Johnson 1	110	2178

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
RUSK COUNTY—		
Ball-Malone et al, Bradford 1	2550	3660
Foster-Deep Rock-Wainwright-West Oils, Ltd., Camp 1	3000	3649
E. M. Jones & Houston Oil Co., Crim 1	5150	3695
VAN ZANDT COUNTY—		
Pure Oil Co., I. D. Miller 2	5000	2953

NEW MEXICO

Company, Well and Location	Initial Production Bbls.	Depth
LEA COUNTY—		
Midwest Ref. Co., O. B. Terry 8	3890	4190



Sam Houston

Each Monday evening at 10:15 the Houston National Bank presents the Houston National Players in sketches based on the life of Sam Houston, and the Houston National Concert Orchestra, one of the South's finest musical organizations.

When the Houston National Was Young

When the Houston National Bank was founded in 1876, Indians still roamed the Texas prairies; and, except in the more populous settlements, no one's life was safe.

Contrast the Texas of 1876—the Houston of the same period — to the empire state and metropolitan city of today. Giant trucks have replaced the covered wagon on the highways. And right along in step with the progress of state and city, the Houston National has gone, making friends all down the years.

The Houston National Bank of today comprehends a full banking service —a courteous, friendly service—yet geared to suit the individual needs of any firm or individual.

So, with fifty-five years of consistent service behind us, we feel that we can lend you valuable business prestige. In each short hour of the day the Houston National is called upon to care for many and varied banking needs—and in rendering each efficient service the bank retains that individual contact with customers and their financial affairs that everyone desires.

HOUSTON NATIONAL BANK

Main at Franklin

Permits Granted For New Wells

▼ ▼ ▼

ARKANSAS

OUACHITA COUNTY—J. D. Reynolds, W. S. Pace 1, Middle block 28, town of Stephens, 21-15-19.

LAFAYETTE COUNTY — Cosby Prod. & Royalty Co., J. A. Biddle 1, 150 ft s, 600 ft w ne cor 1-20-26.

OUACHITA COUNTY—
J. D. Reynolds, P. C. Grayson 1, center block 11, town of Stephens, 21-15-19.

UNION COUNTY—The Ohio Oil Co., Riley Furlough 3, 408 ft n, 192 ft e sw cor, nw ne 12-17-14.

CALIFORNIA

COYOTE HILLS—Standard Oil Co., Emery 48, 13-3-11.

KETTLEMAN HILLS—Standard Oil Co., No. 6, 29-23-19.

LONG BEACH—Davis Investment Co., No. 19, 29-4-12, Highlin Oil Corp.'s No. 1, 30-4-12.

NEWHALL—York-Smullin Oil Co., No. 6, 13-3-16.

PLAYA DEL REY—Birch-Royer Oil Co., Lovell Comm. 1, 28-2-15. Transcalifornia Oil Co., No. 1, 28-2-15.

ROSECRANS—Tureco Oil Co., Community 1, 8-3-13.

KANSAS

COWLEY COUNTY—Suppes et al, Reynolds 2, sw c se 33-32-7e.

McPHERSON COUNTY — Otstot et al, Kaufman 1, nw c sw 14-21-3w. Palmer, Phillips and Shell, Winn 2, sw se nw, 7-20-1w. Palmer, Phillips and Shell, Winn 1, ne nw sw, 7-20-1w. Reserve Oil Co., Ritz 1, ne c sw, 31-19-1w. Lario O&G and Shell, Logree 1, nw c 31-19-1w. United Pet. and Sinclair, Loquemont 1, ne nw se 20-19-1w. Darby Pet. Corp., Fletcher 1, sw c 16-19-1w.

MORTON COUNTY—Sidwell Drlg. Co. and Kuhns, Ferguson 1, c se 9-34-39w.

RENO COUNTY—Derby Oil Co. and Reserve Oil Co., Goering 1, sw nw se 1-23-4w.

SEDGWICK COUNTY — E. B. Shawver, Robbins 2, ne nw sw 21-28-1e.

OKLAHOMA

CARTER COUNTY — Ames Drilling Co., Hooks 2, sw se se 13-1s-3w.

CREEK COUNTY — Olean Petroleum Co., Bigpond 3, (owd) sw ne ne 36-15-7e. W. S. O'Hair et al Barnett 1, ne c nw sw 14-16-10e. A. A. Bailey et al, Weaver 1, nw c sw 18-19-9e. Gled Oil Co. et al, Hamilton 1, nw c ne ne 29-19-9e.

GRADY COUNTY — Badgett and Cooper, Williams 1, c sw, 24-4n-8w.

JEFFERSON COUNTY—O. V. Beck, Seay 6, ne c nw sw se 34-6s-5w.

LINCOLN COUNTY—Slick Oil Co., Fee 2, se c sw 7-14-4e. Magnolia Pet. Co., Wagner 1, nw c ne 18-14-4e.

MUSKOGEE COUNTY—J. E. Rose et al, Howard 12, sw c ne ne ne 30-15-16e.

OKFUSKEE COUNTY—E. L. Jillson et al, Billy 1, se nw nw 29-12-9e.

OKLAHOMA COUNTY—Argood et al, Catalina 2, nw c se se 15-11-3w. Phillips Pet. Co., Dora 1, sw c ne nw 10-11-3w. Courter Oil Co., White 1, se c nw sw nw 10-11-3w. Champlin O&R Schilling 1, nw c se sw 10-11-3w. Slick Estate Classen 5, sw c se nw nw 2-11-3w. Western Bond and Share Co., Danciger 1, se c nw sw sw 2-11-3w. Nordic and Bratt, Nordic 1, nw c sw sw sw 2-11-3w. R. A. Bratt et al, Wright 1, ne c sw nw sw 2-11-3w. Westgate Oil Co., Mead 1, cwl se ne se 34-12-3w. I. T. I. O. and Phillips Pet., MKT 1, "B", cnl sw se se 34-12-3w.

OKMULGEE COUNTY—Whitcomb et al, Harris 5, nw c ne ne 1-14-14e. C. D. Kingensmith, Farr 3, cel se nw 35-16-11e.

POTTAWATOMIE COUNTY—Payne Drlg. Co., et al, Bullock 6, ne sw ne 22-6-3e.

SEMINOLE COUNTY—Mid-Continent Pet. Corp., Harjo 1, sw ne nw 6-5-6e.

For Tabulation and Comparison See Market Section

STEPHENS COUNTY — Geo. Pace et al, Bush 5, sw c se ne nw 3-2s-8w. Geo. Pace et al, Watkins 9, nw c ne se se 21-2s-7w. Cooper et al, Duncan 1, nw c ne 28-2s-7w.

TULSA COUNTY—Murta, Sherry and Carter Oil Co., Wilson 3, ne c nw se nw 32-17-12e. H. W. Bouder et al, McIntosh 1, cel w2 nw nw 4-17-14e. Preston et al, Perryman 2, cel nw nw 4-17-14e. Owens et al, Haikey 4, se c nw sw 33-18-14e. Bradstreet et al, Morgan 1, se c sw sw se, 7-19-14e. Chandler et al, McIntosh 2, ne c 29-19-14e.

TEXAS

ARCHER COUNTY—E. B. Madden, Olney, J. T. Richardson, 40, 3, B 22, J. Scott sur, 300 ft n of No. 1; 4, 150 ft from n and e lines. Fain-McGaha Oil Corp., Wichita Falls, A. J. Ikard, 240, 1, J. Levins sur, 150 ft from s and e lines.

AUSTIN COUNTY — Humble O&R Co., Houston, R. Thompson, 13, W. C. White sur, 200 ft from nw and 200 ft from ne line; L. R. Sherrod, 5, W. C. White sur, 2000 ft nw and 200 ft from sw line.

BEXAR COUNTY—I. L. Dingman, San Antonio, W. Gembler, 49, 1, J. Montez sur, 150 ft from n and w lines of Blk 7.

BROWN COUNTY—F. P. Hynes et al, San Antonio, L. Leach, 85, 2, B 69, BBB&C sur, 1390 ft from n and 396 ft from w line.

CALLAHAN COUNTY—Greathouse & Russell, Baird, W. A. Ramsey, 100, 3, 2282 TE&L sur, 1350 ft from w and 155 ft from s line.

CARSON COUNTY—Texas Interstate Pipe Line Co., Amarillo, B. Heydrick, 80, 1, S 86, B 5, I&GN sur, 1342 ft from e and 667 ft from s li sec.

COLEMAN COUNTY—J. T. Anderson, Cisco, C. G. Burkett, 1, 1, Lot 241, I. Harris sur, center. Arcadia Ref. Co., Coleman, Wm. Burkett, 89, 1, D. J. Holt sur, 150 ft from s and e lines.

CHAMBERS COUNTY—Humphreys Corp., Houston, E. H. Winfree 10, 2, W. D. Smith sur, 50 ft from w and 478 ft from s line.

GREGG COUNTY—Selby Oil & Gas Co., Tulsa, Wm. Tyndale, 214, 1, Wm. Tyndale sur, 250 ft s of center of n line. Hunter & Rowe, Dallas. J. R. Watson, 15, 1, H. R. Caruthers sur, 153 ft from w and 150 ft from s line. Sultan Oil Co., Oklahoma City, S. F. Thrasher, 40, 1, G. W. Hooper sur, 330 ft from s and e lines. S. F. Hurlburt et al, Longview, A. J. Page, 80, 1, J. F. Dixon sur, 507 ft from n and 940 ft from w line. Magnolia Pet. Co., Dallas, B. E. Rodden, 42, 1, Wm. Robinson sur, 200 ft from nw and 200 ft from w line. H. W. Elliott, Fort Worth, M. Andrews, 20, 1, Wm. Hyde sur, 150 ft from s and w lines. E. B. Hopkins et al, Longview, J. B. Watson 25, 1, J. Caruthers sur, 361 ft from n and w lines. Merren, Miller & Van Horn, Shreveport, M. Smith, 10, 1, I. C. Skillern sur, 150 ft from s and w lines.

GRAY COUNTY—Wilcox O&G Co., Tulsa, Coombs, 21, S 35, B 3, I&GN sur, 330 ft from n and e lines of sw¼. Stanolind O&G Co., Pampa, Cobb C, 160, 1, S 165, B 3, I&GN sur, 330 ft from s and e lines of se¼.

GUADALUPE COUNTY — Sun Oil Co., Dallas, A. E. Dowdy, 111, 1, J. C. Darst sur, 150 ft from n and 1200 ft from e line; C. Knobloch, 75, 14, J. W. Robinson sur, 300 ft n and 153 ft e of No. 2.

HARDIN COUNTY — Rio Bravo Oil Co., Houston, Fee, 158, 109A. J. F. Cotton sur, 200 ft w of No. 110A; C 110A, 50 ft e and 200 ft s of 110A.

HUDSPETH COUPNTY—Patillo & Welch, Finley, K. Briggs, 640, 1, S 13, M 22, T&P sur, 190 ft from s and w lines of sec.

HUTCHINSON COUNTY—Continental Oil Co., Wichita Falls, J. W. Moore, 80, 1, S 21, B M21, T. C. Ry. sur, 330 ft from n and e lines of s½ sw¼.

JIM WELLS COUNTY — Gulf Prod. Co., Houston, R. Shaeffer, 384, 2, No. 1 J. Pointevent sur, se corner.

JEFFERSON COUNTY—Yount-Lee Oil Co., Beaumont, McFaddin, 146, P. Humphrey sur, 2772 ft from w and 2528 ft from n line.

JONES COUNTY — S. C. Yinglin, Fort Worth, J. A. Williams, 150, 1, S 17, B 19, T&P sur, 330 ft from s and e lines.

LIBERTY COUNTY—Gulf Prod. Co., Houston, E. W. Boyt, 621, 12, A. A. Allen-H&TC sur, 500 ft e of No. 11.

LIVE OAK COUNTY — Hewitt, Hawn & Sloane, Beeville, N. Pender, 145, 1, BS&F sur,

LOVING COUNTY—Eppenauer Drilling Co. San Angelo, G. Salisbury, 40, 1, S 89, B 1, W&NW sur, 465 ft from sw and se lines. P. L. Hoffman, Cisco, Wheat-Ramsey, 160, 1, S 83, B 1, W&NW sur, 330 ft from e and 990 ft from s line.

MARION COUNTY—Jack Hamilton, Longview, J. C. Lindsay, 80, 1, A. Albright sur, 1170 ft from w and 150 ft from s line.

NUECES COUNTY—Moody-Seagraves Prod. Co., San Antonio, J. B. Sedwick, 192, 1, 155 ft from e and 1050 ft from s line. Houston Oil Co., Houston, R. Morgan, 484, 2, S 7, R. Del Oso sur, 1230 ft e of No. 1.

PANOLA COUNTY — Arkansas Louisiana Pipe Line Co., Shreveport, L. Werner, 82, 13, B. C. Jordan sur, 600 ft from e and 330 ft from n line.

PALO PINTO COUNTY—R. B. Thomas, Strawn, Thomas, 6, 1, S 1, I. Ryan sur, 200 ft from n and w lines.

PECOS COUNTY—Cardinal Oil Co., San Angelo, White-Baker 320, 1, S 47, B 194, GC &SF sur, 330 ft from s and w lines.

RUSK COUNTY—F. M. Jones & Houston Oil Co., Houston, J. M. Crim, 16, 1, Hobson sur, 150 ft from n and w lines. D. M. Peterson A, 10, 1, I. Ruddle sur, 150 ft from s and w lines. Westexas Oil & Royalty Corp., Fort Worth, J. C. Talley, 11, 1, J. Ximinez sur, 150 ft from s and e lines. W. B. Hamilton et al, Wichita Falls, W. M. Camp, 30, 2, J. Ximinez sur, 770 ft from w and 225 ft from s line. Humble O&R Co., Houston, L. D. Crim, 628, 5, E. G. Sevier sur, 150 ft from s and 3120 ft from e line. Olsan Bros., Henderson, Brown, 32, 1, M. J. Pru sur, 450 ft from e and 150 ft from s line. Markham & Dunning, Fort Worth, J. N. Peterson, 25, 1, R. E. Wynne sur, 150 ft from n and e lines. Shaw Oil Co., Wichita Falls, Ashby, 2½, 1, J. Ximinez sur, 150 ft from ne and se lines. C. P. Oil Co., Wichita Falls, M. Alford, 20, 1, J. Ximinez sur, 150 ft from n and w lines. Lide-Rowe Oil Co., Inc., Shreveport, C. V. Young, 30, 1, M. J. Pru sur, 150 ft from s and e lines; C. V. Young 10, 1, M. J. Pru sur, 150 ft from s and e lines. Haynes Drilling Co., Shreveport, J. T. Brown, 40, 2, M. J. Pru sur, 150 ft from s and e lines. Humble O&R Co., Houston, J. N. Peterson, 12, 1B, I. Ruddle sur, 150 ft from s and e lines. E. R. Tennant, Dallas, D. Bradford, 500, 1, J. Ximinez sur, 200 ft from n and w lines. Westexas Oil & Royalty Co., Fort Worth, J. C. Talley, 11, 2, J. Ximinez sur, 150 ft from n and e lines. Mid-Kansas O&G Co., Tulsa, S. H. Moores, 200, 1, M. J. Pru sur, 155 ft from n and 162 ft from e line. A. M. Griffith, Fort Worth, J. F. Lowe, 100, 1, Wm. Williams sur, 450 ft from n and 861 ft from e line. H. L. Hunt, Henderson, C. Ashby, 109, 5, J. Ximinez sur, 150 ft from n and 647 ft from e line. Cameron-Rus County Properties, Inc., Fort Worth, Thrash, 17, 1, M. J. Pru sur, Fox & Butler, Dallas, A. Thrash, 14, 1, M. J. Pru sur, 150 ft from s and w lines; 2, 150 ft from s and e lines; 3, 150 ft from n and e lines; 4, 150 ft from n and w lines.

SHACKLEFORD COUNTY—E. R. Hornbeck, Putnam, J. L. English, 150, 3, S 47, T&P sur, 150 ft from w and 300 ft from s line.

(Continued on page 100)

Electric Welded Pipe . . . . Lapweld
Casing Line Pipe . . Tubing . . Standard Pipe

Standard Seamless Tubular Goods

Rotary Drilling Machinery

Rotary Chain « « « «

Rotary Slips « « « «

Sucker and Pull Rods « «

Valves for Every Purpose

Rock Bits . . Core Bits . . Valves . . Tool Joints

«Asbesgraphite» Brake Blocks

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Republic Supply Company

OIL AND GAS WELL SUPPLIES
Cable and Rotary Tools

GENERAL OFFICES: HOUSTON, TEXAS

Wildcat Reports From All Sections

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
PECOS COUNTY—		
B. C. Mann et al, Scharff-Blackman 1	*	2098

ANDREWS COUNTY—Deep Rock Oil Co. et al's Kuykendall 1, elev 3217 ft, top anhydrite 1678 ft, salt 1720-2810 ft, top lime 4045 ft, sd with 1500 ft 31.5 gravity oil in hole at 4245-4506 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, dr 2795 ft.

COCHRAN COUNTY—Continental Oil Co.'s Slaughter 1-B, elev 3809 ft, dr 3960 ft. Penn Oil Co. & Kiskadden's Slaughter 1, lcn.

COKE COUNTY—Reid-Hitchins & Stanolind O&G Co.'s Duncan 1, spd and sd.

CONCHO COUNTY—W. C. Beesley et al's Sam Waring 1, dr 135 ft. A. W. Turner-Cromwell & Wesner's Brosig 1, dr 1640 ft.

CRANE COUNTY — Continental Oil Co.'s Cowden 2-B, dk. Cranfill Bros. Oil Co. et al's Muir 1, elev 2499 ft, top white lime 2330 ft, sd hfw and prob abn 4347 ft. Cranfill & Gulf Prod. Co.'s J. B. Tubb 1, elev 2526 ft, salt 505-1400 ft, top brown lime 1410 ft, top white lime 2455 ft, spraying 125 bbls fluid, 85 per cent water, dr 4986 ft. C. C. Duffy & Gulf's Cowden 1, elev 2523 ft, top salt 635 ft, sd 1960 ft.

CROCKETT COUNTY — Taylor-Link Oil Co.'s Bullock 1, elev 2738 ft, top salt 1090 ft, testing with 1250 ft oil in hole at 2637-62 ft.

CULBERSON COUNTY—Cranfill Bros. Oil Co. et al's Seay 1, sd 460 ft. W. L. Kornrumpf et al's W. D. Garren 1, sd 1225 ft.

DAWSON COUNTY—R. A. Albaugh et al's Robinson 1, sp and sd.

ECTOR COUNTY—Galt-Brown Co. & Penn Oil Co.'s Cowden 1, sd 180 ft. Southern Crude Oil Pur. Co.'s Cowden 2, elev 3965 ft, top anhydrite 1782 ft, salt 1872-2805 ft, dr 3765 ft. H. F. Wurtz et al's Ibbetson 1, elev 2840 ft, top salt 865 ft, sd 3280 ft.

EDWARDS COUNTY—Phillips Pet. Co.'s Holman 2, elev 2274 ft, dr 7715 ft.

EL PASO COUNTY—Tri-State Oil Co.'s Louis Bobadella 1, dr 515 ft.

FISHER COUNTY—Roeser-Pendleton, Inc., & Amerada's Gribble 1, elev 1864 ft, dr 2240 ft.

GARZA COUNTY—Penny & Porsey's Justice 1, rig.

GAINES COUNTY—Texas Consolidated Oil Co. & T. P. Coal & Oil Co.'s E. H. Jones 1, elev 3636 ft, dr 1535 ft.

TOM GREEN COUNTY—Phillips Pet. Co. et al's Gulden 1, elev 2016 ft, (dd) dr by junk 5010 ft.

HOWARD COUNTY—Continental Oil Co.'s E. E. Brinkley 1, rig; Eason 2, elev 2707 ft, top lime 2090 ft, swab 155 bbls oil 4 hrs at 2430-44 ft. Greene Prod. Co.'s Denman 1, sp and sd.

HUDSPETH COUNTY—R. G. Patillo & Ed. Welch's K. S. Briggs 1, sp and sd.

IRION COUNTY—Chas. Denny & W. R. Andrews' Tankersley 1, elev 2207 ft, co 1360 ft. Stanolind O&G Co.'s W. H. Williams 1, elev 2544 ft, ur 1450 ft. Straughn et al's Tankersley 1, elev 2306 ft, sd 1473 ft.

JONES COUNTY — Bonds-Trout-Julian & Gulf Prod. Co.'s M. J. Williams 1, elev 1898 ft, est 25 bbl producer broken lime 2530-71 ft. Hardly Able Oil Co.'s Butler 1, rig. J. B. Jameson et al's King 1, dr by tools 1550 ft. J. L. Hart et al's Roberts 1, elev 1555 ft, sd 1000 ft. Shaheen Oil Co. et al's J. T. Chittum 1, dr 850 ft. Shaheen ½ Union Oil Co.'s King 1, dr 2075 ft. Sam C. Yingling et al's J. A. Williams 1, dr 1800 ft.

LOVING COUNTY—The California Co.'s J. G. Allen 2, top salt 830 ft, dr 1970 ft; Allen 3 and 4, rigs; Reagan-McIlvain 7, salt 780-4095 ft, top Delaware 4305 ft, top sand 4327 ft, reaming hole with show oil and water 4343 ft. Folbre & Evans' D. P. Dean 1, dr 365 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr — straight-reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

Grisham-Hunter Corp.'s Dean 1, dr 490 ft. Henshaw et al's Reagan 2, rig. Pete Hoffman et al's Ramsey 1, sp; Ramsey 2, lcn. Lewis & Slagle Drlg. Co.'s Cartwright-Henderson 1, elev 2901 ft, salt 585-2907 ft, sd for cas 2915 ft. C. H. Lockhart et al's Hubbard 1, top salt 715 ft. dr 3065 ft. H. W. Martin et al's Wheat-Russell 1, elev 2679 ft, top salt 750 ft, dr 3600 ft. Miller-Burge & Healy's Chapman 1, top salt 750 ft, top Delaware 4285 ft, top salt 4325 ft, flow oil with little water 4356-82 ft. Rush-Anderson & Moor's Wheat 1, lcn. F. S. Tenant et al's Roy Martin 1, rig. West Texas Pet. Corp.'s J. G. Allen 2, top salt 810 ft, dr 2320 ft; Salisbury 1, dr 660 ft.

MENARD COUNTY—L. G. Priest et al's Sorrell 1, elev 2279 ft, fsh 2695 ft.

PECOS COUNTY—Charlesworth-Messenger Oil Co.'s Butz 1, elev 2519 ft, sd 1290 ft. E. L. Chapman et al's Streety 1, elev 2563 ft, temp. abn. 2210 ft. C. L. Dittman Oil Co.'s Eaton 2, lcn; Jackson 1, fsh 965 ft. Humble O&R Co.'s H. L. Kokernot 1, elev 3593 ft, top salt 2713 ft, dr by tools 5140 ft, td 6170 ft. Magnolia Pet. Co.'s Eaton 1, dr 1020 ft. J. R. Miller et al's Bennett 1, sd 2285 ft. McCarty Oil Co.'s Gray 3, sd 1437 ft. Penn Oil Co.'s J. B. Alvix 1, elev 3493 ft, top Butler lime 1385 ft, ur 1980 ft. O. J. Perren et al's Eaton 2, elev 2437 ft, dr by tools 1765 ft. Pure Oil Co.'s Harrison 1, elev 3495 ft, top Delaware 4265 ft, sd 5000 ft. Riser & White's Riser 1, sd 500 ft. Eric Schelling & Slaughter's Yates 1, sd 340 ft. Williams & Moran's Heiner-State 1, elev 2528 ft, dr 1855 ft. Tex-Mex Pet. Corp.'s Eaton-Pure 1, elev 2426 ft, top salt 940 ft, sd 965 ft.

REEVES COUNTY—California Co.'s Kloh 2, cem 16-inch cas 1145 ft, td 1150 ft.

RUNNELS COUNTY—Chas. Dutton et al's Dean 1, sd 2315 ft.

SCHLEICHER COUNTY — Eastland Oil Co. Unit Plan's Tisdale 1, elev 2295 ft, dr 1435 ft. Paul Teas & Walter Gant's Allison 1, elev 2311 ft set 6⅝ cas 4950 ft. J. D. Wesner et al's Ratcliff 1, elev 2408 ft, fsh 1060 ft.

SCURRY COUNTY—R. B. Pender O&G Co.'s Davis 1, elev 2208 ft, top salt 445 ft, ur 5000 ft. Scurry County Oil Exchange's Earnest 1, lcn. Seifert & Dibble's Blackburn 1, top salt 720 ft, sd 2315 ft.

STERLING COUNTY—W. C. Beasley et al's W. L. Foster 1-A, elev 2518 ft, set 10-inch cas 580 ft.

TAYLOR COUNTY — Adams-Ferguson & Hobbs' Lowe 3, elev 1918 ft, fsh 1970 ft. Geo. Goodrum et al's L. Ackers 1, lcn. J. B. Jameson et al's Webb 1, elev 1905 ft, dr 6260 ft. Sanger et al's Abilene Water Works 1, elev 1759 ft, dr 2770 ft.

TERRELL COUNTY — Mid-Kansas O&G Co.'s M. H. Goode 1 ,elev 2405 ft, sd making 6½ mil ft sweet dry gas 5606-12 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, elev 2130 ft, sd 6780 ft.

UPTON COUNTY—Bennett Oil Co. & P. H. Willams' Shirk 1-A, set cas 775 ft. C. C. Duffey et al's McClintic 4, rig. Gulf Prod. Co.'s McElroy 91, dr 1175 ft; McElroy 92, rig. G. E. Farley et al's Lane 1, dr 1250 ft. Penn Oil Co. & Shell Pet. Corp.'s Halamacek 1, elev 2806 ft, top anhydrite 1535 ft, top salt 1568 ft, sd prob abn 4722 ft.

WARD COUNTY—Alpine Oil & Dev. Co.'s Boogher 3, sp. A. Bradford et al's B. Carson 1, dr 155 ft. California Co. & Atlantic's Gordon 1, rig. Empire Gas & Fuel Co.'s Sealy 1, elev 2654 ft, top salt 1175 ft, top lime 2320 ft, dr by tools in oil and gas pay 2582-2610 ft. Gulf Prod. Co.'s Hutchings 7, dr 745 ft; O'Brien 16, elev 2640 ft, top salt 1195 ft, top lime 2330 ft, dr up slips 2530 ft. J. G. Kugle et al's Chas. Wallis 1, top salt 1835 ft, top lime 2215 ft ,top salt 2440 ft, swab and flow 70 bbls oil (34.6 gravity) daily at 2448-62 ft. Magnolia Pet. Co.'s Atlantic-Sealy 1, elev 2686 ft, set 8¼ cas 1312 ft. R. F. Owen et al's Johnson 1, elev 2499 ft, top salt 1600 ft, sd 2000 ft. Prairie O&G Co.'s Hill 1, elev 2523 ft, top salt 975 ft, cem cas 2168 ft. Paul Ryan et al's Allen 1, elev 2931 ft, top salt 800 ft, dr 1650 ft. Shipley Oil Corp.'s Hayzlett 5, top salt 725 ft, dr 1970 ft; Monroe 1-A, elev 2655 ft, top salt 2485 ft, fsh 3780 ft.

WINKLER COUNTY—Magnolia Pet. Co.'s Bashara 1, elev 2884 ft, top anhydrite 829 ft, top lime 2317 ft, dr 2950 ft; J. B. Walton 1, elev 2931 ft, top salt 1165 ft, dr 2670 ft.

CENTRAL EAST TEXAS

Completion

Company, Well and Location	Initial Production Bbls.	Depth
CHEROKEE COUNTY—		
Arcadia Ref. Co. et al, Jones 1	*	4003

BOWIE COUNTY — Maud Redwater Oil Co.'s Merritt 1, Y. S. McKinney sur, sd 635 ft. Lee Timberlake et al's Tidwell 2, L. M. Rice sur, elev 290 ft, sd 720 ft.

CASS COUNTY — C. E. Murdock et al's Coody 1, Evans Watson sur, lcn. Olds-Smith et al's Joe Athenay 1, J. C. Byers sur, dr 1265 ft. John C. Rogers et al's W. Q. Henderson 1, Wm. Davis sur, sd 810 ft; Lanier 1, K. A. Welborn sur, elev 366 ft, sd 2275 ft. J. E. Smitherman & Beene's A. S. Fell 1, Farrell sur, dr 560 ft.

CHEROKEE COUNTY—Arcadia Ref. Co.'s Jones 1, abn in water sand 3996-4003 ft, Austin chalk 3848-3937 ft. Roy C. Baker et al's M. M. Tomme 1, Wm. George sur, top Pecan chalk 3080 ft, dr 3210 ft. D. H. Byrd et al's Fariss 1, elev 215 ft, dr 2310 ft. W. G. Gray et al's H. Kyle 1, Jas. McClain sur, lcn. McDonald Bros. et al's W. A. Newton 1, Thos. Quevedo sur, rig. Wm. A. Stone et al's Blount Decker 1, S. Selman sur, dk.

DELTA COUNTY—Delta Dev. Co.'s Hays-Netherly 2, dr 1910 ft. Everts Drilling Co.'s M. Sansing 1, J. B. Craig sur, sd 2960 ft; A. E. Slough (160-ac) 1, J. T. Craig sur, lcn. D. S. Hoad et al's J. J. Baker 1, R. Carson sur, elev 437 ft, sd 1550 ft. Worthington & Stedham's W. H. Dejernett 1, E. Chick sur, elev 492 ft, sd 1925 ft.

FRANKLIN COUNTY—Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, dr 2410 ft.

GREGG COUNTY—Alco Oil Corp.'s Castleberry 1, lcn. Arkansas Fuel Oil Co.'s R. S. McKinley 1, Wm. Robinson sur, rig. Claude Bell & R. A. Graddy's George 1, M. V. Winkle sur, elev 366 ft, sp and sd. A. R. Byrd & Ed. B. Hopkins' Mitchell 1, J. S. Carithers sur, dk. D. H. Byrd-Gulf-Humble & Republic's Cammorras Bros. 1, Haden Edwards sur, elev 386 ft, skid dk; Frank Elder 1, Wm. J. McCurry sur, elev 341 ft, dr 2610 ft. W. L. Brandon-McCamey et al's J. F. Richards 1, M. V. Winkle sur, elev 339 ft, Pecan chalk 2540-2927 ft, top Austin chalk 3428 ft, dr 3450 ft. Daniels & Patton's L. C. Dudley 1, Henry Wade sur, rig; Knowles 1, M. V. Winkle sur, elev 382 ft, dk. E. E. Eslick & Little's Springhill Church 1, D. Sanchez sur, dr 1615 ft. Groveman Bros.-Hepburn & Doran's L. L. Machie 1, Geo. Chambliss sur, lcn. Mrs. Mamie Hammonds-

·Q·P·O·

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Clark et al's J. M. Hamby 1, John Lout sur, elev 375 ft, top Saratoga chalk 2361 ft, top Pecan chalk 2508 to 2886 or 2902 or 3015 ft, fsh 3515 ft. O. T. Hickman et al's Smith 1, Skillern sur, dk. Hunter-Lide & Rowe's Mitchell 1, J. S. Carithers sur, rig. Hurlbert & Brown's L. L. Mackey 1, G. Y. Chambliss sur, lcn; A. J. Page 1, Chas. Williams-Robertson sur, dr 1510 ft. Lloyd Oil Corp's (now Harry W. Eliott) S. G. Andrews 1, Wm. F. Hyde sur, dr 1865 ft. Magnolia Pet. Co.'s B. E. Rodden (42 1/3-ac) 1, Wm. Robinson sur, rig; Rodden 2, dk. Marine Oil Co.'s J. R. Watson-Mitchell 1, J. S. Carithers sur, lcn. K. E. Merren et al's Maude Smith 1, Skillern sur, sp. Foy Roberts et al's L. M. Colburn 1, Henry Hathaway sur, lcn. Navarro Oil Co.'s Tenery 1, Wm. Robinson sur, rig. Phares & Sample's Smith 1, Skillern sur, lcn. Roeser-Pendleton, Inc. et al's B. E. Rodden 1, sd 2000 ft. C. Rosenfield et al's J. A. Knowles 1, Wm. Lisle sur, dk. Selby O&G Co. et al's Snavely 1, Wm. Tynedale sur, dk. Sultan Oil Corp.'s Stuckey 1, Hooper sur, dk. Paul Vitek et al's L. Osbern 1, R. R. Bobbett sur, rig. J. K. Wadley (was Eslick) et al's Castleberry 1, Wm. Robinson sur, dk. Werby & McMim's S. King 1, W. P. Chisum sur, dk. P. H. Wilson et al's Hill 1, Ruddle sur, dk. Ben Youngblood et al's W. M. Lamb 1, David Ferguson sur, dk.

HENDERSON COUNTY—H. B. Ashburn et al's T. E. Terry 1, sd 3993 ft. E. L. Chapman et al's Cade Bros. 3, J. B. Dorsey sur, Pecan chalk 3073-3267 ft, top Austin chalk 4385 ft, sd broken chalk 4620 ft.

LAMAR COUNTY—K. O. Bundy et al's G. S. Legate 1, J. V. Cheney sur, rig. Everett & Allen's J. A. Guest 1, Luke Roberts sur, sd 1670 ft.

LEON COUNTY—Sun Oil Co.'s Ella Grayson 1, Marquetta Blk., dr 1540 ft.

LIMESTONE COUNTY—H. H. Dearing & Sons et al's B. B. Barron 1, E. Mabry sur, Pecan chalk 1622-1817 ft, sd 2100 ft. Geo. B. McCamey et al's Kosse Townsite 1-A, dr 1650 ft. E. E. O'Byrne & Chapman's S. W. Hancock 1, H. York sur, sd 1165 ft. A. M. Yost et al's S. J. Fenner 1, H. C. Hoskins sur, Austin chalk 2935-3213 ft, dr 3800 ft.

NAVARRO COUNTY—L. G. Priest et al's H. Albritton 1, Austin chalk 2276-2734 ft, sd 3035 ft.

RAINS COUNTY—Rains County Oil Corp. (Roy Westbrook's) Wm. Cates 1, C. Cage sur, lcn.

RED RIVER COUNTY—E. L. Chapman et al's Morris-Guest 1, S. Larkin sur, elev 485 ft, fsh 1505 ft. Droppleman & Bundy's J. W. Cuningham 1, S. V. Chi sur, dr 2555 ft. Echols & Peters' E. Howison 1, W. Humphries sur, dk. Everett & Allen's W. F. Bryan 1, P. Vaughn sur, dk. Pierson et al's J. R. Dellahunty 1, sp and sd. Johnson Petroleum Co.'s Style 1, Dean sur, dr 2280 ft.

ROCKWALL COUNTY—A. W. Walker & Son et al's M. S. Jones 1, S. Simmons sur, sd 425 ft; Paul Snow 1, J. E. Sherwood sur, sd 555 ft.

RUSK COUNTY—Joe Burnham-Andy Anderson-Cameron & Lloyd Oil Corp.'s Nicely 1, Thos. Obar sur, elev 339 ft, top Pecan chalk 2210 ft, dr 2710 ft. Capps-Smith & Andy Anderson's J. L. Cochran 1, J. Roth sur, elev 386 ft, Pecan chalk 2683-3011 ft, dr 3500 ft. Carolyn Oil Corp.'s E. C. Gary 1, John Puburn sur, lcn. R. W. Giles (Shreveport Prod. Co.'s) Newt Orr 1, Wm. Tippett sur, dk. Laster Oil Co. & Miller's B. B. Gray 1, Jas. McLean sur, dk. Moss et al's Hamp Matthews 1, elev 387 ft, sd 2338 ft. Pearl Oil Co. (Paul Vitek's) Eaton 1, F. Cordova sur, sp and sd. Rusk County Oil Co.'s Robertson 1, Penny sur, sd 1201 ft. Nat Sadler et al's Ed. Sparks 1, Abner Nail sur, sd 500 ft.

SMITH COUNTY—Big Indian Oil & Dev. Co.'s Walford 1, Jas. Jordan sur, dk. Guy Lewis et al's Cook-Green 1, Jas. Jordan sur, dr 415 ft. T. B. Slick & J. G. Kugle, Jr., et al's M. Freeman 1, A. J. Lagrone sur, elev 498 ft, Pecan chalk 2080-3275 ft, sd in Austin chalk 3623 ft.

UPSHUR COUNTY—Dr. F. F. Beeler et al's R. H. McClelland 1, M. P. Torres sur, dk. DeArmand et al's Fluellan 1, Marshall Mann sur, lcn. J. W. McCullough et al's John Copeland 1, Marshall Mann sur, lcn. McGinley Corp.'s Reeves Truitt 1, L. B. Brown sur, elev 358 ft, sd repairs 2820 ft.

SOUTH TEXAS

ATASCOSA COUNTY—Jack Abernathy et al's Harris 1, 2 miles n Pleasanton, just w highway, dk.

BANDERA COUNTY—Permian Oil Co.'s Taylor 1, 15 miles e Bandera on Red Bluff Creek, near Kendall County line, dr 300 ft, last report.

BASTROP COUNTY—Turner, Wharton & Anderson's J. E. Harris 1, Joshua Gray sur, 3 miles n Dale pool, dk. Bolling et al's (Chas. Long) McWilliams 1, George T. Glasscock sur, dr below 2600 ft.

BEE COUNTY—Alexander et al's McFall 1, 3 miles s Skidmore, moving on. Catlett & O'Neill's Miller 1, Ronald Hoskiss sur, 8 miles w Beeville, lcn. Mauldin and Fisher's A. J. Kimball 1, Stephen winship sur, 7 miles sw Pettus in Grayburg area, ru. J. S. Mauldin's Mauldin 1, just s Pettus in G. A. Kerr sur, fsh for 10 joints drill stem, bottom hole 3835 ft. E. S. Price's Weiss 2, 900 ft sw No. 1, 3½ miles se Pettus, sd 4552 ft. Rowan and Hope's Mrs. Fannie Goree, sec 4, T. B. Barton sur, 5 miles w Grayburg pool, dr 1355 ft. United Production Corp.'s Ray 31, 2050 ft from e and 2200 ft from s line, Geo. A. Kerr sur, midway between Ray1McKinney and townsite pools, sp 2-17-31; Ray 32, Habbermacher sur, 3 miles n Pettus main pool in n extension pool, tested sw 3692-3701 ft, to dr to sand at lower level; Ray 34, 900 feet e Ray 26, Thomas Hanson sur, dr 2754 ft.

BEXAR COUNTY—Penn Oil Co.'s Cooksey 1, discovery well, Rialls sur, 11 miles e San Antonio, wo, total depth 1461 ft. Russell and Moore's Milla 3, Navarro sur, oil show 635 ft. J. Morgan Russell's Price-Story 1, Navarro sur, 10 miles s San Antonio, dr around 1030 ft. Weilbacher and Brock's Ernest 1, sd 925 ft. Wagener and Stieren's San Antonio Irrigated Farms 1, G. Jajor sur, sw McDonna, dr about 735 ft. Uechert et al's Palfrey, reported showing in Edwards lime 1710 ft, no further report.

BLANCO COUNTY—Thomas Lysles et al's Stanford 1, sur 155, 3½ miles nw Blanco City, dr around 930 ft. Meeks et al's Walker 1, pull casing in effort to recover tools, total depth 1025 ft. Forest Oil Company's Hohenberger 1, sur 94, moving in larger rig. Hardy Sitton's McMillen 1, 2 miles w Blanco City, Benjamin Williams sur No. 125, to re dr 570 ft.

BROOKS COUNTY—Ed East's Garcia 1, Las Mastena y Gonzalene grant, still sd 1002 ft. Houston Oil Co.'s Holbein-Wormser 3, Palo Blanco de Maguellar grant, dr 2833 ft in shale.

CALDWELL COUNTY—V. F. NeHaus et al's J. B. Moore 1, 450 ft from e and 200 ft from s line of s 200 acres of 236-acre tract in J. B. Moore sur, 6 miles s Lockhart.

COMAL COUNTY—Caldwell and Lanier's T. J. Byler 1, H.E.&W.T sur No. S-894, 10 miles s Blanco City, pull 8-in cas to ream and set 10-in for deep test.

DUVAL COUNTY — Humble Oil & Ref. Co.'s Kohler 50, dr 4457 ft. Southern Oil Co.'s King Harper 2, sur 323, lcn. A. Buchanan's Welder-Wood 2, sec 102, dr out plugs, casing set 1510 ft, sand topped 1519 ft, showed 100 lbs pressure and 5 ft oil and mud. Vacuum Oil Co. and S. R. & C. Oil Co.'s Duval County Land Co. 3, sur 97, cored sand 1726-32 ft, prep to set cas. O'Byrne et al's Weil Bros. 1, B.&S.F. sur, 7 miles sw S. & O. pool, rigged up. Frasher and Schoolfield's Bishop Duval Land Co. 3, 330 ft n and e of center of sec 135, ru.

FRIO COUNTY—Wray & Dunbar's Barnes 1, 1 mile from Big Foot, sec 123, to set 5 3/16-in cas at 3662 ft.

GOLIAD COUNTY—Slick Estate's Allen 1, O. Marshall sur, set 6⅝-in cas 4197 ft, wait on

▼ ▼ PERMITS ▼ ▼

(*Continued from page 96*)

THROCKMORTON COUNTY — Woodley Pet. Co., Shreveport, R. H. Brown, 335, 2, 1610 TE&L sur, 150 ft from s and w lines of sec.

VAN ZANDT COUNTY—Palmer & Dent, Dallas, W. P. Foster, 101, 1, Montgomery sur, 600 ft from se and 300 ft from sw line. Pure Oil Co., Fort Worth, F. B. Smith, 80, 4, J. Walling sur, 400 ft e of No. 2; R. E. Cade, 50, 2, A. McPhail sur, 225 ft from w and 893 ft from s line; A. D. Clark, 62, 9, J. Walling sur, 495 ft from n and 200 ft from e line; E. L. Fowler, 32, 9, J. Walling sur, 150 ft from e and 203 ft from s line; W. T. Jarman, 8, 6, NCSL sur, 250 ft from n and 344 ft from e line; R. L. Wells, 19, 12, Moore sur, 250 ft from n and 744 ft from w line; F. York, 188, 3, J. Walling sur, 250 ft from n and w lines.

WICHITA COUNTY—Hawkins & McQuigg, Fort Worth, E .E. Goetze, 41, 5, S 2, GC&SF sur, 330 ft from s and 150 ft from w line. Bonner Co., Wichita Falls, Cole A, 158, 34, J. McCool sur, 300 ft e of No. 27. C. R. Conyer, Electra, G. Woodard, 80, 1, S. 288, Wag. Col. sur, 570 ft from n and 1170 ft from w line.

WARD COUNTY — S. J. Rixford, Grand Falls, City, 5½, 1, S 11, B 5, H&TC sur, 150 ft from s and w lines of Blk. 9. A. Bradford et al, Grand Falls, B. Carson, 40, 1, S 26, B 5, H&TC sur, 330 ft from nw and sw lines.

WASHINGTON COUNTY — Sun Oil Co., Beaumont, R. Caraway, 50, 5, J. F. Perry sur, 600 ft nw of No. 2.

WHARTON COUNTY—Z. J. Gayle, Houston, W. J. Woytek, 20, 2, S. F. Austni sur, 50 ft from s and w lines.

WILLIAMSON COUNTY — R. A. Westbrook, Fort Worth, A. Simmons, 58, 7, S. Miller sur, 150 ft sw of center of ne line.

YOUNG COUNTY—W. S. Langford, Wichita Falls, E. W. Hunt, 60, 1, 182 TE&L sur, 150 ft from n and e lines. W. B. Hamilton et al, Wichita Falls, J. K. Jeffery, 160, 1, 43 TE&L sur, 750 ft from n and 150 ft from w line. Floyd Ard, Jr., Wichita Falls, Belknap, 20, 1, 21 TE&L sur, 150 ft from n and w lines. Ben Banner, Graham, S. R. Jeffery, 80, 1, 51 TE&L sur, 150 ft from s and w lines; T. J. Routan, 40, C1, 23 TE&L sur, 150 ft from s and e lines. Wichita Prod. Co., Wichita Falls J. A. Watson, 52, 1, 1910 TE&L sur, 950 ft from n and 150 ft from e line. Clower & Ross, Wichita Falls, Olney Country Club, 47, 1, 221 TE&L sur, 981 ft from s and 190 ft from w line. Texas Co., Wichita Falls, N. Finch A, 640, 5, 39 TE&L sur, 459 ft from e and 150 ft from s line. F. H. E. Oil Co. & Kimbell & Anderson, Fort Worth, N. Finch, 40, C7, 30, TE&L sur, 150 ft from n and w lines. W. F. Hamilton, Wichita Falls, N. C. Finch, 40, 9, 40 TE&L sur, 150 ft from n and 450 ft from w li n½ sw¼.

ZAPATA COUNTY—S. R. B. & C. Oil Corp., San Antonio, I. T. Trevino, 40, A14, S 66, 450 ft from w and 150 ft from s li Blk. 2. Neilson & Co., Laredo, Borrego, 160, 1, S 5, No. 8 sur, 150 ft from n and w lines of Blk. 11. Shankle & Murray, Laredo, F. Cuellar, 40, 1, S 61, B 6, 150 ft from n and e lines. Grimm & Yakey, Agua Dulce, P. Santos, 160 1, No. 6, Comitas sur, 650 ft from ne and 3100 ft from se line. Lowe & Rogers San Antonio, P. Benavides, 40, 1, No. 11, 150 ft from s and w lines of Blk. 5.

LOUISIANA

CALCASIEU PARISH—Union Sulphur Co., Sulphur, Fee 765, 29-9s-10w, 286 ft s and 100 ft w center of sec. Union Sulphur Co., Sulphur, Fee 766, 29-9s-10w, 350 ft s and 470 ft w of center of sec.

CONCORDIA PARISH—United Gas Public Service Co., Houston, Saunders 3, 42-8n-10e, 2497 ft e and 3883 ft s ne cor of sec, 11-8n-9e.

DE SOTO PARISH—H. L. Hunt, Inc., El-Dorado, Furman 1, 5-14n-13w, 330 ft s and 330 ft w of n¼ cor of section.

IBERVILLE PARISH—Std. Oil Co., Shreveport, A. Wilbert Lbr. & Shgle. Co. 9, 78-8s-8e, 700 ft e and 760 ft n sw cor se¼ sw¼.

RICHLAND PARISH — Southern Carbon Co., Monroe, Thomason B-2, 23-16n-6e, 1980 ft s and 2080 ft w ne cor of sec.

SABINE PARISH — The Ohio Oil Co., Shreveport, Bowman Hicks 7, 2-7n-12w, 250 ft n and 50 ft e of sw cor ne¼ of ne¼.

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cement, showed 875 lbs pressure, some oil in 3 minutes on drill stem test of sand 4198-4212 ft. Gibson Oil Corp.'s Parks 1 (wo), 5 miles ne Goliad, bailing down about 3900 ft, showing some gas.

GUADALUPE COUNTY — Humble O&R Co.'s L. G. Denman 22-A, casing set 2570 ft, wait on cement. Magnolia Pet. Co.'s Kelin 7, set cas 2580 ft. M. E. Roamell 1 (wo), sdtr drill stem, dr 2340 ft. Luling O&G Co.'s Nixon 1, e of Darst Creek, 1 mile e Magnolia-Nixon well, prep to sp. Sun Oil Co.'s Dowdy 1, one-fourth mile s Darst production, ru; Knoblock 14, dk.

HAYS COUNTY—Harley and Whittington's Heidenreich 1, near Kyle, prep to re dr 2750 ft.

JIM WELLS COUNTY—Prairie Lee Oil Co.'s Oppenheimer 1, no report. Blair & Son and Stewart's M. Perez 1, sec 9, blk 16, prep to set cas at 2123 ft to test sand. R. H. Ewell's Doering 1, blk 6, Seefeld Farms Lots sub, dr below 500 ft. Carsill Oil & Gas Co.'s McGill 1, Wm. D. Baldwin sur, 3 miles n Armagosa, sp 2-18-31. Gulf Prod. Co.'s Mrs. Shaeffer 2, Pointevent sur, near Duval line, dr 522 ft.

JACKSON COUNTY — Trinity Drillers (Texas Unity Oil Co.'s) C. E. Hungerford 1, 2 miles e Edna gas field, H. Smith sur, prep to test sand 4015 ft.

JIM HOGG COUNTY—J. D. Pulliam, Jr.'s Jones 1, Holden sub, Diego Hinjosa grant, still sd 2844 ft. J. W. Pippin's N. Hinnant, blk 11, sur 147, dk.

KARNES COUNTY—Fort Bend Oil Co.'s Newberry 1, near Green, six miles n Pettus, whipstock, mill out casing and re dr 2626 ft, now dr 2995 ft. J. Morrisey's Ragsdale 1, resume dr 1998 ft, now dr 2188 ft; Cochran 1, sd 1012 ft.

KERR COUNTY—Evans and Gant's Seiker and Mears 1, sw cor sec 1605, CSSD & RGNR Ry sur, 2 miles ne Love test, fsh 300 ft, to set 15½-in cas. Mims et al's (formerly Evans and Gant's) J. E. Young 1, nw cor sec 28, A. E. Bruce sur, north and slightly east of Love well, prep to ru.

KENDALL COUNTY—Hardy Sitton's W. B. Garvin 1, D. L. Richardson sur No. 7, 1 mile ne Kendalie, dr 1250 ft.

KINNEY COUNTY—Magnolia Pet. Co.'s Wardlow 1, dr 5145 ft.

LA SALLA COUNTY — Fred W. Volz's Coleman 1, blk 15, sur 514, still sd at 40 ft, (to be dropped until operations resumed.)

LIVE OAK COUNTY—Houston Oil Co.'s Brown Land & Cattle Co. 3, nw corner of M. B. Kivlin sur, dr 5262 ft in shale; Brown Land & Cattle Co. 4, sw cor M. B. Kivlin sur, dr 4620 ft in brown shale. Picket, Buzzini and Jacob's Kay 1, Bridget Faddin sur, 5 miles from George West, sd 4017 ft. Phillips Pet. Co.'s W. W. Goebel 1, Refugio School lands, 3 miles ne Oakville, dr 1019 ft. Southern Exploration Co.'s Ponder 1, B.S.&S.F. sur, No. 1, ru. Markley et al's Brown 1, wash down to re dr, originally abn at 2500 ft.

McMULLEN COUNTY—Brodie, Shearer & Emerick's Shiner 1, 12 miles se Tilden, to test sand cored at 1170 ft.

NUECES COUNTY—V. F. Neuhaus et al (formerly Grim and Yakey's) Bauer 1, 15 miles w Corpus Christi, just n Robstown, test sw sand 4509-15, dr deeper. Moody-Seagraves Producing Co.'s Sedwick 1, 1200 ft n Houston Hunter producer in Saxet field, set 386 ft surface cas.. Bess et al's Boory 1, 2½ miles nw Saxet field, no report. Houston Oil Co.'s Ollie Purl 1-B, blk 7, Peters sur No. 2, Agua Dulce area, dr 4365 ft. H. H. Weinert's Mohle 1, no report.

REAL COUNTY—Gant and Kilgore & Eastland Oil Co.'s Dan Auld 1, sec 23, CCSD & RGNR Ry sur, 2 miles sw Love well, prep to sp. Evans and Sprinkle et al's Haby 1, 7 miles sw Love well, dr 1438 ft, encountered gas sand 1149 ft, 200 ft higher than discovery well; Marcus Auld 1, sec 15, blk D, HE&WT sur, set 10-in cas 2030 ft in shale, gas sand 2090-2100 ft, dr ahead.

REFUGIO COUNTY—Houston Oil Co.'s Rooke 1-B, 2 miles sw Refugio, ¼ mile west production, dr 6395 ft; Rooke 14 (wo), (in old gas area, three miles w Refugio, sw offset Smith-Rogers well, cored sand 4173 ft. Moody-Seagraves Producing Co.'s Heyser 1-B, 1 mile se production, set cas 6446 ft, total depth 6464 ft, dr out plugs; St. Johns 1-B, s of Refugio, dr out plugs 5517 ft. Morgan and Rutherford's Rogers Hrs. 1, ¼ mile ne Smith Rogers well, 3 miles w Refugio, sd 3684 ft. L. L. Smith's Rogers Hrs. 2, in old gas area, 3 miles w Refugio, sd 5110 ft.

EAST TEXAS

HARRISON COUNTY — Hunter et al's Daugherty 2, W. B. Burris sur, 12½ cas 245 ft, dr rock 3202 ft. Karona Pet. Co.'s A. J. Bohler 1, S. F. Sparks sur, sp. O. H. Parkening's T. J. Taylor 1, Walter H. Payne sur, dk. T. J. Taylor 2, J. C. Hawley sur, dk. Rowan & Nichol's Henry Pitts 1, E. A. Merchant sur, lcn. W. H. Hobson, Tr.'s, P. P. Taylor 1, Henry Vardeman sur, lcn.

MARION COUNTY—Trammell et al's Hussey 1, Chas. Lockhart sur, elev 282 ft, top chalk 1771 ft, 8¼-inch cas 1514 ft, junk in hole, arr abn, td 1878 ft. Rondeau & Hickman's McGaugherty 1, W. J. Willis sur, sd 2450 ft. Hindman et al's Lindsey 1, Alex Albright sur, 12½ cas 250 ft, sd 400 ft.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, 6⅝ cas 2670 ft, 5 3/16 cas 2977 ft, tested est 50,000 ft gas, much sw 2998 ft, dr hd lime 3097 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Bell et al's Burnett Lbr. Co. 1, S. B. Hendrick sur, elev 186 ft, 8⅛ cas 2027 ft, dr 3105 ft. Warren & Dawes' McNeese 1, A. Booker sur, dk. Dillon & Bradham's Baldwin 1, Hampton West sur, 12½ cas 43 ft, wo ds in shale 1905 ft. United Prod. Corp.'s Steele 17, B. C. Jordan sur, lcn (Trinity test). Neff et al's Brumble 6, B. C. Jordan sur, dk (Trinity test). Natural Gas Prod. Co.'s H. H. Alvord 1, B. C. Jordan sur, 10-inch 1160 ft, 6⅝ 4381 ft, tested est 5 mil ft dry gas, td 4698 ft, arr deepen. Daisy O&G Co.'s Rucks Heirs 1, Jno. Palmer sur, 12½ cas 780 ft, top chalk 1352 ft, setting 8-inch cas, td est 1900 ft. Ark. La. P. L. Co.'s Werner Sawmill 3, B. C. Jordan sur, sp 12½ cas 142 ft. Everett Prod. Co.'s E. L. McDaniels 1, Alamson Barr sur, dk pat.

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, ta 4803 ft.

SHELBY COUNTY — Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd wo rotary 3111 ft.

TEXAS GULF COAST

AUSTIN COUNTY—O'Hara et al's Schrader 1, sd 3485 ft. Empire's Kunze 1, San Felipe, dr 6000 ft gypsum.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, 2 mi s Nash Dome, dr 6200 ft shale. United Oil Synd.'s Speer 1, 3 mi n Danbury, dr 1370 ft, sand and shale. Mills Bennett's Randon 2, Allen, dr 4590 ft sand, slight oil show; Reese 2, Allen, dr 4090 ft shale; Allen 3, Allen, dr 3230 ft salt. Freeport Sulphur Co.'s Fee 2001, sr 5260 ft shale. Layne et al's Wisdom 7-A, dr 3400 ft lime. The Texas Co.'s Ewing 1, Manvel, dr 7160 ft sand and shale. Rycade & Amerada's Seaburn 2, dr 6690 ft shell.

BURLESON COUNTY — Mid South Oil Co.'s Duckworth 1, 2 mi e Clay Station, tested brackish water 2590 ft.

CALHOUN COUNTY — The Texas Co.'s Smith 1, Chocolate Creek, ru.

CHAMBERS COUNTY—Pure's Lost Lake 5, Lost Lake, abn 7471 ft.

FORT BEND COUNTY—Gulf's Davis 61, Big Creek, dr 3675 ft sand, gas show 3665 ft; Moore 28, dr 3100 ft sand.

GALVESTON COUNTY — Mars McLean's Cade 20, ru.

GRIMES COUNTY—Wainwright-West Oils, Ltd. & Triangle Corp.'s Templeman 1, 6 mi s Navasota, dr 4190 ft sand

HARDIN COUNTY—W. N. Hooks' Walton 1, Lancaster sur, 820 ft. The Texas Co.'s Fee 307, Sour Lake, prep to make test 3000 ft.

HARRIS COUNTY — Cypress Oil & Dev. Co.'s Kitzman 2, 2 mi n Cypress, ta 4430 ft. Guf States Oil Co.'s Augsperger 1, dr 5010 ft shale. Humble's Minnetex 4, Mykawa, dr 6150 ft shale; Minnetex 5, Mykawa, ru; Gehring 1, Mykawa, completed for 50 bbls 4904 ft. Kouri & Grayburg's Bender 1, Pierce Junction, sdtr and cem back to 3940 ft. Rio Bravo Oil Co.'s GH&SA 102, Pierce Junction, ru. Smith et al's Fee 3, Pierce Junction, ru. Warner-Quinlan's Minchen 2, Pierce Junction, lcn.

JACKSON COUNTY — Warner-Quinlan's Hungerford 1, 1½ mi of Edna, tested sw with trace oil 3905 ft.

JEFFERSON COUNTY—Humble's McFadden 1, 8 mi e Big Hill, dr 4500 ft sand. Keith et al's Reed-Hanakmer 1, 3 mi ne Westbury, dr 3700 ft sand and shale. The Texas Co.'s Pipkin 4, Big Hill, dr 4330 ft sand.

LAVACA COUNTY — Cranfill-Reynolds' Hermes 1, Ryan sur, dr 3580 ft shale, top of Jackson 2495 ft.

LIBERTY COUNTY—Cranfill-Reynolds' Davis 7, ru. J. R. Ingram's Hornbeck 1, 2 mi s Cleveland, dr 4240 ft shale, top of Jackson 4023 ft. Texas Gulf Sulphur Co.'s Carter 2, fsh 880 ft. Hamm et al's Harvard 1, Davis Hill, sd 1015 ft. Tucker et al's Bell 1, Devers, sd 560 ft. Gulf's Boyt 12, Hankamer, dr 680 ft gumbo; McFadden 3, Moss Bluff, dr 5560 ft shale. Humble's Breeden 2, Moss Bluff, dr 330 ft shale; Sergent 2, Moss Bluff, dr 2600 ft sand; Sterling 7, Moss Bluff, dr 4870 ft sand. Harrison Oil Co.'s Quintette 4, North Dayton, sdtr 4412 ft.

MATAGORDA COUNTY — Cockburn Oil Corp.'s Hawkins 2, Shepherds Mott, set 6⅝ inch cas 5170 ft. Empire's Boker 1, Citrus Grove, set cem plug 5320 ft.

MONTGOMERY COUNTY—John Deering et al's Knight 1, 6 mi s Conroe, dr 1590 ft shale. Lake Creek Oil Co.'s Hunt 1, s Conroe, sd 670 ft. Price & Wilhite's Jeurgus 2, dr 3210 ft shale.

ORANGE COUNTY—Crews Oil Co.'s Mansfield 1, dr 700 ft sand, set ½ joint screen flowing fresh water. Gulf's Vidor 1, 2 mi n Vidor, dr 5730 ft shale.

SAN JACINTO COUNTY—E. P. Edwards et al's Bennett 1, dr 40 ft clay.

VICTORIA COUNTY — The Texas Co.'s McFadden 2, Bloomington, completed as gas well, 25 to 40 million feet of gas daily, 2025 ft.

WASHINGTON COUNTY—Yegua Oil Co.'s Graves 1, 3 mi n of Independence, ru. Penn-Tex Oil Co.'s Kamas 2, Brenham, dr 200 ft sand.

LOUISIANA GULF GOAST

ACADIA PARISH—Yount-Lee's Latrielle 9, Evangeline, fsh 8666 ft.

ASCENSION PARISH—Gulf's United Land Co. 19, ru. Triumph Oil Co.'s Lacey 2, stdg 4225 ft.

AVOYELLES PARISH — M. L. Vincent's Morrow 1, sd 4220 ft.

CALCASIEU PARISH — Freeport Sulphur Co.'s Gray 1, lcn. Wilfred Lahay's Jardell 1, 2 mi ne Vinton, sd 3250 ft. Dr. Thomas et al's Hewitt 1, 2 mi ne Edgerly field, lcn. Vacuum's State 7, lcn. Union Sulphur Co.'s Moss 2, Lockport, dr 3170 ft gumbo. J. O. Davis' Ind. Lbr. Co. 1, Starks, dr plug 6568 ft. Crawford Doyle's Johnson 1, Starks Dome, sd 375 ft. Union Sulphur Co.'s Fee 749, Sulphur, dr 3949 ft gumbo; Fee 762, fsh 5500 ft.

CAMERON PARISH — Freeport Sulphur Co.'s Yount-Lee 8, Black Bayou, dk. Shell's Watkins 16, Black Bayou, set 9⅝-inch cas 4060 ft; Black Bayou State 2, ds test 4107 ft, showed salt water. The Texas Co.'s State Calcasieu Lake 7, Calcasieu Lake, lcn. Vacuum's Cameron Meadows 2, Cameron Meadows, bldg dk. The Texas Co.'s State 8, E. Hackberry, dk fdn. R. E. Seiss Trustees Vincent 2, Hackberry, sd 510 ft. Magnolia's Sweet Lake Land Co. 2, Sweet Lake, ru. Pure's Yount-Lee 10, Sweet Lake, dr 6760 ft sand

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 10, Jefferson Island, dr 1880 ft rock; Lake Peigneur 11, Jefferson Island, dk. The Texas Co.'s Vermilion Bay 6, Vermilion Bay, dr 2870 ft gumbo.

IBERVILLE PARISH—Gulf's Gay 1, Bayou Choctau, fsh 4020 ft. Standard's L. Baist 1, Bayou Blue, sd 670 ft; Case 2, Des Glaise, lcn; Schwing 1-A, Bayou Blue, sd 5420 ft; Schwing 3, Bayou Blue, sd 2980 ft; Wilbert 8, Bayou Des Glaise, dr 4250 ft sand. Shell's Wilbert 5, White Castle, dr 5490 ft, salt, top 5477 ft. Texas Gulf Sulphur Co.'s Wilbert 8, Bayou Choctau, dr 210 ft gumbo; Wilbert 9, lcn.

JEFFERSON ISLAND—H. T. McClain et al's Atterbury 1, Welsh, dr 4720 ft shale.

LA FOURCH PARISH—The Texas Co.'s Leesville 2, reaming to test at 3030 ft.

PLAQUEMINES PARISH — Gulf's Buras Levee 2-B, Rose Dome, flowed some salt water, mudded off and now dr ahead at 2235 ft. Humble's Cockrell-Moran 2, Lake Grande Ecaille, dr 4600 ft sand. The Texas Co.'s Garden Island 5, Garden Island Bay, lcn.

ST. JAMES PARISH — Convent Oil Co.'s Jacobs 1, trying to sdtr 1834 ft.

ST. LANDRY PARISH — Gulf's Haskins

POSITIVE....AUTOMATIC

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Nothing is left to chance! This new Brewster drill collar has a positive bit lock for any style bit. It prevents backing off while going into the hole. Made in all sizes. A. P. I. specifications.

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Shreveport,Louisiana

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4-A, dr 3855 ft rock. The Texas Co.'s Botney Bay 9, Port Barre, dr 65 ft sand.

ST. MARTIN PARISH—Harrison & Abercrombie's Barras 1-A, dr 6070 ft shale and lime. Humble's Woodward 1, Bayou Bouillon, sdtr 5239 ft; State 4, Bayou Bouillon, dr 4470 ft shale and lime.

ST. TAMMANY PARISH—Washingotn & St. Tammany Drlg. Co.'s Coussack 2, dr 2030 ft gumbo.

TANGIPAHOE PARISH—Joan Dev. Co.'s Lake Superior Oil Co. 1, setting 4-inch cas 3016 ft.

TERREBONNE PARISH—La. Gas & Fuel Co.'s Miner Estate 1, Houma, dr 4770 ft gumbo. The Texas Co.'s Bay Junop 2, Bay Junop, abn 7034 ft; Bay St. Elaine 1, Bay St. Elaine, dr 4450 ft sand and lime; Bay St. Elaine 6, lcn; Lake 8, Lake Barre, dr 4340 ft shale; Lake Barre 10, lcn; Lake Barre 11, lcn; Lake Barre 12, lcn; Lake Barre 13, lcn; Lake Barre 14,; Lake Pelto State 4, Lake Pelto Dome, dk.

VERMILION PARISH—Pure's S. W. La. Land Co. 1, dr 5050 ft shale and shell.

NORTH LOUISIANA

Completions

BOSSIER PARISH—		
H. I. Morgan et al, Kendricks B-12, 22-19-11	*	2050
DE SOTO PARISH—		
C. D. Neff et al, Dowling 1, 18-13-14	*	3180
SABINE PARISH (Zwolle)—		
H. W. Perritt, Bowman-Hicks 2, 2-7-12	1000	2281
UNION PARISH—		
Ouachita Nat. Gas & Oil Co., Inc., Smith 1, 36-20-2e	¶¼	2308

BIENVILLE PARISH—James Synd.'s Lawhon 1, sw ne 15-16-8w, showed gas in sandy shale in Tokio 2860 ft, sd wo cas, td 2866 ft.

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, dry thru ds 2062-67 ft, sd 2200 ft. H. I. Morgan et al's Kendricks B-12, 22-19-11, 12½ cas 175 ft, dry abn, td 2050 ft. Rambaugh et al's Allison 1, 10-19-13, tested dry, sd 1100 ft. R. O. Roy's W. H. Hodges 1, 19-16-10, cemtd 12½ cas 140 ft.

CADDO PARISH—United Gas Pub. Serv. Corp.'s Emmons 1, ne sw 27-23-16, sp 12½ cas 363 ft; Fortner 1, nwc frac sec 5-22-16, rig up to deepen old well, td 5020 ft. G. M. Gordon's Hatcher 1, ne nw 11-17-15, lcn, (to be 5500 ft test). Pyramid O&G Co.'s Wheeler 1, se sw 9-18-16, rig. Libby et al's Foster 1, 29-15-16, dr gummy shale 2700 ft. Ralph Davidson et al's F. Weiller 1, 33-17-13, 10-inch 40 ft, sd 920 ft, dr hd chalw 1520 ft.

CATAHOULA PARISH—Nationual Drilling Co.'s Marsh McMillian 1, 26-9-6e, 6⅝ cas 2796 ft, tested sw sd 3086 ft.

CALDWELL PARISH—Hudson et al's Burton 1, 36-12-2e, sr 2537 ft. Carter Bell et al's Taylor 1, 42-14-4e, dk.

CLAIBORNE PARISH—Baird Bros. et al's Whittaker 1, 30-20-7w, dr shale 2415 ft. Bough et al's Alexandria 1, 27-20-8w, sd 2200 ft. O. R. Corp.'s Langston 10, 19-21-7w, 9⅝ cas 2438 ft, dr hd shale 4035 ft.

CONCORDIA PARISH — Fred Stovall's Grasmere 1, 23-8n-10e, 8-inch cas 152 ft, dr 568 ft. United Pub. Serv. Corp.'s Saunders 3, 42-8n-10e, sp 12½ cas 160 ft. Ark. Fuel Oil Co.'s Alexander 1, 47-8-9e, 12½ cas 152 ft, tested sw thru ds 1975-83 ft, dr hd lime 2005 ft. Joe Marr et al's Maxwell 1, 38-3-8e, sd 3622 ft.

DE SOTO PARISH—W. H. Weichert's H. Smith 1, 31-14-15, top gas sand 1653 ft, top chalk 1901 ft, sd 2350 ft. Standard Oil Co. of La.'s Farmer A-6, ne nw 5-13-13, 10-inch 84 ft, dr shale and chalk 2032 ft. Neff et al's Dowling 1, se se 18-13-14, base chalk 2040 ft, dry abn in lime, td 3180 ft; Ramsey 1, 33-13-16, 12½ cas 80 ft, dr 2300 ft. S. A. Guy et al's Dowling Bros. 1, 31-14-14, sd 1354 ft.

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 20-11-10, 10-inch 60 ft, dr 1200 ft. Gulf Ref. Co.'s Bodcaw Lbr. Co. 1, sw ne 13-13-8w, 12½ cas 930 ft, dr 3435 ft. W. M. Coates et al's Collins 1, 28-9-10, base chalk 2612 ft, co to deepen, td 3718 ft. J. W. Cooper et al's Cooper 1, 35-11-10, tested dry in sandy shale 2829-32 ft, sd 2908 ft; Cooper 2-A, 35-11-10, top chalk 1400 ft, claim show oil and gas, arr make ds test, td 1515 ft.

RED RIVER PARISH — Lucky Strike Oil Co.'s Chaffraix 1, 33-12-10, tested est 500 bbls sw, show light oil thru ds 2820-3010 ft, arr plug back, td 3010 ft.

SABINE PARISH—Pearce, Tr.'s, Pearce 1, sw sw 10-7-11, 6⅝ cas 2339 ft, wosr, td 2600 ft. Lawrence et al's Hubley 1, 21-7-11, sd 2650 ft. J. C. Walton's Sabine 1, ne nw 17-7-12, sd 1930 ft. Lacey Jesup Oil Co.'s Brown Lbr. Co. 1, se ne 28-8-10, 6-inch at top Z. marl 2256 ft, top chalk 2690 ft, sd 3160 ft. Lacey Pet. Co.'s Cooper 1, 30-8-11, top Z. chalk 2306 ft, 6⅝ cas 2270 ft, hfo wosr, td 2620 ft. D. H. Reddick et al's Scretchfield et al's Scretchfield 1, 18-9-12, sd 3310 ft. Pelican Nat. Gas Co.'s La. Long Leaf 8, nw sw 4-7-11, 10-inch 102 ft, 6-inch 2310 ft, tested small show oil, sd 2550 ft. P&G Oil Co.'s Williams 1, 21-7-12, rig. Trans-America Oil Co.'s Carter 1, 36-8-12, top marl 2311 ft, 6-inch 2211 ft, 700 ft oil in hole, wc, td 2540 ft. Franks et al's Dew 1, 22-8-11, 6-inch 2111 ft, top marl 2265 ft, arr test, td 2380 ft. D. M. Lide's Ponder 1, 15-7-11, top marl 2393 ft, top chalk 2407 ft, 6-inch 2385 ft, hfo, wosr, td 2800 ft; Ponder 2, ne nw 15-7-11, 10-inch 102 ft, 6⅝ 2364 ft, tested show oil, arr deepen, td 2420 ft. Wilson & Sons' Gandy-Garrett 1, 4-5-13, ta 2509 ft. Tarver et al's Baker 1, nw ne 36-8-12, top marl 2209 ft, 8-inch 2212 ft, top chalk 2226 ft, base chalk 2752 ft, top Blossom 3040 ft, ta 4200 ft. Jno. Woodley's Sabine 1, ne se 12-8-12, 10-inch 103 ft, dr 1900 ft. H. W. Perritt's Bowman-Hicks 2, 2-7-12, 10-inch 72 ft, top marl 2199 ft, 6⅝ 2202 ft, flowing 1000 bbls oil day thru 7/16-in. choke, td 2281 ft; Bowman-Hicks 3, 2-7-12, 10-inch 96 ft, sd 970 ft. Triangle Pet. Co.'s Sabine 1, sw sw 36-8-12, 6⅝ 2274 ft, 4½ at 2260 ft, 4½ parted at 1900 ft, arr junk, td 2274 ft. Diffie & Barrett's Lites 1, se nw 34-8-11, 10-in. 105 ft. J. M. Thompkins' Stoker 1, 10-7-11, 10-inch 105 ft, 6⅝ 2362 ft. Magnolia Pet. Co.'s Lucius 1, nw ne 2-5n-12w, 13⅜ cas 204 ft, show oil 2595-99 ft, fsh ds, td 3855 ft. Gautier et al's Marshall 1, se nw 30-8-12, 10-inch 100 ft, fsh ds 1800 ft. Ohio Oil Co.'s Bowman-Hicks 6, se nw 2-7-12, 10-inch 203 ft, 6⅝ 2200 ft, coring chalk 2495 ft; Bowman-Hicks 7, ne ne 2-7-12, rig. Durham Oil Co.'s Polly 1, sw ne 18-8-12, 10-inch 105 ft, coring 2050 ft. Caddo-Sabine Synd.'s Davis 1, sw sw 8-7-10, sp 10-inch 80 ft, dr 950 ft (now carried in name Packard O&G Co). Merritt, Tr.'s, Byrd 1, se nw 1-7-11, dr 960 ft. Frank Buttram et al's Hale 1, ne ne 1-7-13, top marl 2066 ft, setting 6⅝ cas, td 2074 ft. Bradley Drilling Co.'s Newton 1, nw se 25-8-12, 10-inch 100 ft, dr 1500 ft.

TENSAS PARISH—Seip et al's Fowler 1, 10-10-10e, sd 905 ft. A. R. Willis' Curry 1, 39-11-12, sd in shale 3009 ft.

UNION PARISH—Ouachita Nat. O&G Co., Inc.'s Smith 1, sw ne 36-20-2e, 13-inch 280 ft, 6-inch 2101 ft, gauged 176,000 cu ft gas 875 pounds rock pressure, td 2308 ft.

WEBSTER PARISH—D. M .Coyle's Frazier 1, ne se 27-23-11, dk. Cassidy & Davis' Nickerson 1, ne sw 29-23-10, sd 160 ft. Red Hawk Oil Co.'s Matthews 1, se nw 11-23-9, -12½ cas 100 ft, sd 250 ft.

COLORADO

ADAMS—N. M. Slatt's 1, se 27-26-64w, ready to res at 2500 ft.

ARAPAHOE—McDebb Drlg. Co.'s Fitzsimmons 1, 7-45-55, co 5735 ft, show some oil and gas. Merrett et al, U. P. 1, nw 17-5-65, stand 1600 ft, hfw.

BACA—A. R. Jones Oil & Optg. Co., Boice Cattle 1, 22-34-42w, dr 4659 ft.

EL PASO—Utemore Synd., Cannon 1, ne 10-16s-66w, stand 1100 ft.

HUERFANO—Parker Club, Fee 1, se 4-28s-68w, prep to res, td 4116 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-59w, show gas, dr 3866 ft.

LAS ANIMAS—Oklahoma Drlg. Ass'n, Radcliffe 1, ne 28-28-52, sd 100 ft.

LA PLATA—McGarr Pete Co.'s Pinon Mesa 1, ne 34-33n-12, lcn. Klem Pete Corp.'s Olbert 1, se 9-25n-12w, stand 3125 ft. Murchison Oil Co., Doescher 1, nw 29-33n-13w, sd 1225 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, co at 3370 ft.

MOFFAT—Mtn. Fuel Supply's State 2, tract 37-12-100, dr 2065 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, sd 2950 ft.

MONTEZUMA—Haller et al's Haller 4, sw 4-36-14w, dr 87 ft.

MONTROSE—Uncompahgre O&G Co., Colo. Title & Trust 1, 27-50n-10w, spd.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-57w, dr 4100 ft.

PUEBLO—Anchor Oil Co.'s Easley 1, sw 35-22s-7w, sd 520 ft.

PARK—So Park Oil Co.'s Milligan 1, se 13-9s-76w, ur 8¼-inch to 1800 ft. So. Park O&G Co.'s Eache 1, ne 6-9s-76w, prep to res.

ROUTT—Ingersoll et al's Omholt 1, 29-4n-87w, sd 115 ft.

WELD—Eastman Oil Co.'s Steele 1, ne 14-2n-67, sd 165 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56, stand 1710 ft, corrected depth.

NEW MEXICO

CHAVES—Warman Oil Trust, Siebert 1, ne 27-13-24, stand 2035 ft.

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, to res at 3005 ft.

HARDING—Milwaukee Synd., Kerlin 1, se 34-21n-30e, dr at 176 ft.

LUNA—Angelus Oil Mining Ass'n 1, se 20-21s-10w, dr 6012 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18-9w, sd 3255 ft. Wms. et al's A. T. S. F. 1, se 19-18n-8w, stand 2250 ft. Unitel Kern Pete, Inc., 1, sw 1-18-11w, lcn.

OTERO—Ernest et al's 1, se 20-25s-7e, wtg for equip., 1328 ft.

QUAY—Silverstein et al's Wetzel 1, 29-12n-32, stand 175 ft.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pete Co.'s Gov't 1, se 14-30n-7w, sd 250 ft. Governador Oil Co.'s 1, se 12-29n-7w, sd 750 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, stand 1750 ft. Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, dr 2300 ft. Childers Drlg. & Prod. Co.'s Westwater 2, nw 23-31-16w, sd 2525 ft. Rio Grande Dev. Co.'s 2, 9-29-11, prep to res 1380 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, fsh 4730 ft for dr pipe. J. B. Witt O&G Co.'s Magnum 1, se 33-29n-11w, lcn. San Juan Leaseholds, Bowman 3, ne 30-30-15w, dr 2595 ft. Reserve Oil Co., Reserve 3, se 36-22n-14w, dr 210 ft.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2340 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, cas trouble 3368 ft. Cibola Pete Co.'s Crown 1, se 9-13n-14e, stand 820 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 12-12n-22e, prep to res at 1542 ft. Kull et al, Cherryvale 1, ne 34-17n-21e, dr 425 ft.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, prep to res 1643 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-17-7e, dr 1475 ft.

VALENCIA—Acme Oil Co.'s N. M.-Ariz. Land Co.'s 1, ur to 4958 ft. Harlan et al, Harlan 1-A, 5-6n-2e, dr 5600 ft.

WYOMING

BIG HORN—Westland Oil, Inc., 24-54-95, gas at 510 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pete Co.'s 1, 7-57-97, sd 4080 ft.

CARBON—Midwest Refining Co.'s U. P. 27, 11-20-81, sd 1810 ft. Pete Expl. Co. of Calif., 29-23-89, dr 1000 ft.

CONVERSE—Converse O&G Co., 27-33-72, sd 1410 ft. Pioneer Oil Co., 5-31-70, to dr new test.

FREMONT—Texas Prod. Co.'s State 1, 36-44-95, sdtr 6⅝-inch at 4375 ft, prep to set cas, td 4485 ft. P. & R. 1, 33-34-92, sd 4906 ft. Yellowstone Oil Co.'s 1, 15-39-92, td 185 ft. Ward O&G Co.'s 28-34-90, gas show 1500 ft. Maghee et al, 2-35-99, dr 800 ft.

JOHNSON—R. C. Tarrant et al, 4-43-82, to dd.

LINCOLN—Mountain Oil Corp.'s 1, 35-25-116, td 1500 ft. Wyo. Prod. Co., 14-24-113, dr bel 1000 ft.

NATRONA—Summit Oil Co., 21-33n-80w, sd 1220 ft, wait equipment. Midwest's 11, nw 32-34n-77w, stand cem 5340 ft. Cuyler Oil Co., 23-36n-85w, rig. Golden West Oil Co., 36-36-81, ready to res 1242 ft.

NIOBRARA—West Virginia Synd., 7-35-62, td 987 ft, cas trouble.

PARK—Resolute Oil Co., 17-57-101, resum 8250 ft., operations stand.

SWEETWATER—Vermillion Oil Co.'s 1, se 16-12-99, sd 3500 ft.

UINTA—Park City O&G Co., nw 6-15-113, dr bel 2400 ft.

WASHAKIE—Dakota-Wyoming Oil Co., 6,

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ne 24-47-90w, small show 200 ft to be cased off and dd. Ohio Oil Co., lot 14, sec 19-45-92, mvg in rotary.

MONTANA

BIG HORN—Continental Oil Co., 21-6s-35e, resum at 3400 ft.

CARTER—Montasota O&D Co., 7-8s-50e, prep to res 1060 ft.

CASCADE—Andover Oil Co.'s Floweree 1, se 20-21-2w, sd 1405 ft. Lone Star Mont. Oil Co., McLean 1, se 13-21-3e, bldg rig.

CHOTEAU — Williston-Shelby O&G Co., Flack 1, se 12-28-11e, td 2860 ft, hfw.

FALLON—Carter & Co., 12-4n-61e, sd 490 ft.

FERGUS—Northern State Oil Co.'s Woodward 1, se 20-14n-24e, dr 2045 ft. Melton Corp., 24-21n-17e, dr 2850 ft. Pownam Oil Co., 24-19-11e, to res 200 ft.

GALLATIN—Gallatin Valley Oil Co., nw 1-1n-4e, prep to res at 300 ft.

GLACIER—Fulton Pete Corp.'s Blackfeet 1, ne 28-36n-12w, dr 1225 ft. B. & H. Oil Co.'s Haines 1, se 2-34-6w, oil show at 2760 ft. Jefries-Hoerr's Dawson 1, ne 7-31-12w, dr 3060 ft.

GOLDEN VALLEY—Texas-Pacific's 1, sw 21-8s-21e, try for wso 2650 ft. J. F. Dealy et al, ne 28-5n-22e, to resume.

HILL—Jones-Rice-Perkins, se 28-33-12w, dr 400 ft.

JUDITH BASIN—Newton-Waddingham, se 15-16n-10e, dr bel 1110 ft.

LIBERTY—Northland O&G Co.'s Yurman 1, 32-33-5e, to res 3475 ft. Sunburst, McLaren 1, se 9-37-6e, sd 3115 ft. Utopia Oil Co.'s Eleanor Ass'n 1, sw 11-33-6e, dr 3195 ft. Perkins et al, Brown 1, nw 24-35-4e, dr 200 ft.

POWDER RIVER—Creel et al, 7-8s-50e, dr 1200 ft.

ROSEBUD—Prairie O&G Co., 1-X, 26-10-39e, ur at 2270 ft, td 2290 ft. Prairie's 1, Contract 4, 28-10-38, sd 1360 ft because of bad weather.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand 150 ft.

TOOLE—Liquid Gold Oil Co.'s Roberts 1, ne 25-36-12, ur and mudd pipe, td 1900 ft. International Roy. Hold. Co.'s Henry 1, sw 26-35-36, to res 2590 ft, to dd. A-1 Pete Co., se 24-36-1e, dr bel 810 ft.

YELLOWSTONE — Peter Antonioli, 21-2n-25e, dr 500 ft.

KANSAS

MORTON COUNTY — Hydraulic Oil Co., State land 1, nw se, 22-34-43w, sd 3460 ft.

STEVENS COUNTY—Sidwell et al, Kelly 1 ,sw ne 16-34-38w, (owd) sd 2165 ft.

COWLEY COUNTY—Fisher et al, Hurt 1, c sw se se 11-34-3e, ru and sd. Tom Fine, Boyd 1, nw ne, 32-32-4e, 12-inch 1265 ft, sd 2650 ft. Roth and Farrot, Reidy 1, c sw nw ne, 8-32-4e, sd 1040 ft.

HARPER COUNTY—Beeler et al, Bear 1, c ne, 21-31-6w, td 1830 ft, sd.

FORD COUNTY—Carter et al, Community-Everett 18, c ne, 22-29-21w, lcn, (6000 ft test).

SEDGWICK COUNTY—Buck et al, McNanaman 1, c ne nw nw 2-20-1e, sd 1200 ft.

KIOWA COUNTY—McKenna et al, Ralston 1, c ne, 14-28-20e, rig abandoned.

SEDGWICK COUNTY—Streeter & Stearns, Tobin 1, c sw se ne, 5-27-2e, td 3165 ft, ur 6-inch.

FORD COUNTY—Swain et al, Kenthorn 1, c nw, 21-25-24w, 6-inch 3408 ft, dr 4490 ft.

HARVEY COUNTY—Empire & Shell, Showalter 1, nw se, 23-23-2w, sd 1565 ft.

MARION COUNTY—Maidwell, La Master 1, nw c, 31-22-4e, sd 650 ft.

GREENWOOD COUNTY—T. K. Simmons, Barnard 2, sw se se 19-22-12e, dr 1700 ft.

COFFEE COUNTY—Hegberg et al, Kroft 1, se sw se, 30-22-14e, 10-inch 818 ft, td 1300 ft, sd. Roberts et al, Hay 1, sw se nw 32-22-15e, td 1250 ft sd.

BARTON COUNTY—McCool et al, Tsern 1, c sw se ne 12-20-11w, sd 1600 ft.

RICE COUNTY—Cress et al, Sharp 1, se ne, 13-20-10w, dr 1920 ft.

RUSH COUNTY—Dewey & Mitchell, Greenwalt 1, c sw, 17-19-16w, dr 690 ft.

RICE COUNTY—Skelton Oil, Ott 1, c se se, 16-19-14w, td 2065 ft, ur 10-inch. Deitrick & Langston, Purcell 1, nw c, 33-19-9w, rig.

McPHERSON COUNTY — Henderson & Holden, Sommerfield 1, c ne sw 23-19-1w, td 3227 ft, so.

LYON COUNTY—Griffith et al, King 1, nw c 18-19-10e, 12-inch 910 ft, sd.

BARTON COUNTY—Syndicate Oil, Boertz 1, c nw se ne, 13-18-12w, dr 465 ft.

RICE COUNTY — Allison & Fitzwilliams, Blake 1, ne nw 9-18-10w, rig. McFadden & Shell, Jennings 1, c sw ne nw 29-18-6w, dr 400 ft.

McPHERSON COUNTY—Alladin Pet. Co., Larson 1, c nw 22-18-4w, rig abn.

MARION COUNTY—Alladin Pet., Rudolph 1, nw ne, 36-18-3w, rig abn.

NESS COUNTY—Gypsy, Coleman 1, c sw ne, 25-17-25w, 8-inch 3860 ft, dr 4103 ft, 1000 ft water in hole.

ELLSWORTH COUNTY—Aylward et al, Stratman 1, c se nw se, 1-17-10w, sd 610 ft. Gilmore Oil Co. et al, Sturn 1, nw sw 21-17-9w, dr 225 ft.

McPHERSON COUNTY—Slick et al, Sandell 1, c sw sw, 35-17-3w, 6-inch 3005 ft, Viola 3507 ft, dr 3558 ft.

MORRIS COUNTY—Urschell et al, Bersuch 1, c nw se nw 10-17-7e, ru sd.

ELLSWORTH COUNTY — Alladin et al, Stoddenberg 1, c sw, 22-15-10w, sd 1130 ft.

MORRIS COUNTY—Great Basin Oil, Ballyntine 1, c sw se se, 18-16-5e, td 2170 ft, rng 6-inch. Hankenson et al, Cessnum 1, sw se 24-16-9e, sd 900 ft.

ELLSWORTH COUNTY—Milton et al, Kaster 1, se ne 6-14-9 west, td 1476 ft, est 2M gas, sd. Hershey et al, Schalt 1, c ne, 9-14-8w, rig.

SALINE COUNTY—Sampson et al, Sudendorf 1, ne se 30-14-2w, 8-inch 2692 ft; 2785-90 ft, hfw, sd 3170 ft.

OSAGE COUNTY—Riggs-Smith, Wood 1, c se nw, 31-14-15e, 10-inch 1050 ft, sd.

RUSSELL COUNTY — Austin Drlg. Co., Rockefeller 1, se c 6-13-12w, T. Oswald 3003 ft, oil 3042-44 ft, bailed 18 bbls in 3 hrs, 6-inch 3044 ft, sd with packer, sd.

SALINE COUNTY—Twin Mounds Oil Co., Weis 1, c w½ ne nw, 30-13-4w, (owd) 19-inch 1010 ft, sd 2710 ft.

DICKINSON COUNTY—Severs et al, Livingood 1, ne sw 13-13-2e, td 3785 ft, fsh.

GOVE COUNTY — Johnson & Atlantic, Wright 1, c se ne 11-12-27w, 5-inch 4784 ft.

RUSSELL COUNTY—Gilbreath et al, Bratton 1, c ne, 33-11-13w, 8-inch 2458 ft, td 2814 ft, sd.

GRAHAM COUNTY—Schleimer et al, Clark 1, c sw ne ne 11-9-25w, rng 8-inch 3715 ft, td 3790 ft.

CLAY COUNTY—Nebraska Oil, Tivier 1, sw c 19-8-9e, sd 2390 ft.

ROOKS COUNTY—Empire, Holsman 1, c sw ne se, 17-7-20w, td 1335 ft, co.

WASHINGTON COUNTY — Simcox, Penwell 1, nw se ne 16-3-3e, 6-inch 1210 ft, sd 1720 ft.

RAWLINS COUNTY—Danciger et al, Unknown 1, sw c, 3-2-35w, td 2265 ft, ur 10-inch.

OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros., Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e Sec. 9, Mummer et al, Sornick 1, nw c se, hfw 2070-2170 ft, ur 8-inch 2330 ft. T 26n, R 1w, Sec. 32, Boucher et al, Jefferson 1, ne c sw, dr 950 ft.

HARPER COUNTY—T 25n, R 20w, Sec. 12, Empire, Bruce 1, sw c ne ne sw, sd 7935 ft, td.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden, Collmer 2, ne c se ne sw, lost tools 5640 ft, sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al, c sw ne, dr 4970 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse, Beamer et al, White 1, se c nw, dr 5833 ft, crooked hole.

NOBLE COUNTY—T 21n, R 1e, Sec. 12, Barnsdall et al, Miksch 1, nw c sw, td 4849 ft, run 6-inch csg.

BLAINE COUNTY—T 19n, R 102, Sec. 13, Washoma Pet. Co., Phillips 1, c nw sw, sd hfw 4535-37 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healy et al, Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T 28n, R 3e, Sec. 24, Summitt Drlg. Co. et al, Hays 1, nw ne nw, dr 1915 ft.

OSAGE COUNTY—T 28n, R 7e, Sec. 4, L. G. Stanley et al, No. 1, se c sw, dr 1895 ft.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al, McFadden 1, ne c sw, rig. T 22n, R 5e, Sec. 2, Sherry et al, Millsap 1, se c sw, sd 1750 ft. T 20n, R 5e, Sec. 6, W. A. Rookstool, Berry 1, nw ne sw, dr 1951 ft, show gas.

LINCOLN COUNTY—T 13n, R 6e, Sec. 8, Atlantic OP Co., Beebe 1, sw ne sw, lcn.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepard et al, Shepard 1, se nw sw, fsh csg and dr by 3690 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al, McDuff 1, sw nw se, fsh tools 5682 ft. T 8n, R 14e, Sec. 14, C. O. Cannady et al, Smith 1, sw c ne nw nw, rig and tools. T 7n, R 14e, Sec. 5, C. O. Cannady et al, Travis 1, c sw ne, rig. T 6n, R 15e, Sec. 7, Peerine et al, Ringland 1, nw c ne, spud and sd.

LATIMER COUNTY—T 6n, R 18e, Sec. 4, Choctaw Gas Co., Weaver 1, c ne nw, rigging up. T 6n, R 19e, Sec. 16, P. English et al, Weaver 1, c nw se, sd 300 ft.

ATOKA COUNTY—T 1n, R 15e, Sec. 9, Edgerton et al, Rolland 1, c nw, sd 700 ft.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff, Trustee, St. Joseph 1, sw c ne sw se, td 6700 ft, sd.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al, Bruner 1, se c nw, rig.

HUGHES COUNTY—T 7n, R 9e, Sec. 17, Gilcrease, Buckner 1, ne nw se, dr 2600 ft.

ROGER MILLS COUNTY—T 13n, R 21w, Sec. 10, Richfield O&R, Hiatt 1, se c, rig. T 12n, R 24w, Sec. 23, Ute Oil Co. et al, Williams 1, c sw, 10-inch 3346 ft, rust.

ROGER MILLS COUNTY—T 11n, R 26w, Sec. 4, J. J. Rook et al, Davis 1, c nw ne (owd) sd 2840 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey, Robinson 1, c ne nw, sd 150 ft.

CADDO COUNTY—T 9n, R 13w, Sec. 18, J. J. Wright et al, Boys 1, nw c lcn.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al, Blocker 1, nw c, sd 1710 ft. T 8n, R 18w, Sec. 21, Burns & Prince, May Dock 1, sw c, sd 150 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good et al, Cliffel 1, nw c, sd 1615 ft. T 7n, R 21w, Sec. 23, H. A. French et al, Murphy 1, sw nw se, sd 1490 ft, small show oil.

HARMON COUNTY—T 4n, R 24w, Sec. 17, Harmon-Tex Oil Co., Headley 1, ne c, sd 2592 ft.

COMANCHE COUNTY—T 3n, R 9w, Sec. 3, Okla. Nat. Gas Co., Doegel 1, ne c sw sw sw, sd 1450 ft.

STEPHENS COUNTY—T 1n, R 8w, Sec. 25, Ross Southard, McKinley 1, ne c, sd 1063 ft. T 1n, R 7w, Sec. 1, Junior Oil Co., Thompson 1, ne sw se, sd 3329 ft. T 3s, R 8w, Sec. 3, A. L. Andree, Patrick 1, c s2 se, sd 1853 ft.

HUGHES COUNTY—T 5n, R 11e, Sec. 15, J. J. Wright, Roberts 1, se c sw, 2M gas 915-18 ft, sd 1045 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee Oil Co., Phillips 1, ne c sw, lcn.

COAL COUNTY — T 2n, R 8e, Sec. 10, Whitney et al, Miller 1, se c ne (owd), sd 760 ft. T 1n, R 8e, Sec. 35, W. E. McCraw O&G Co., Stiring 1, ne c se, sd 250 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al, Guinn 1, nw c, show gas 360-72 ft, sd 500 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla Drlg. Co., Anderson 1, se ne se, sd 2755 ft.

BRYAN COUNTY—T 6s, R 7e, Sec. 14, W. A. Johnson, Ussery 1, se c, sd 325 ft. T 7s, R 10e, Sec. 8, Bryan Oil Co., Childs 1, ne se sw, sd 660 ft.

LOVE COUNTY—T 8s, R 1e, Sec. 13, Geo. Pace et al, Burkhart 1, ne c nw, td 2512 ft, dry and abn.

NORTHERN CALIFORNIA

Completions

BELRIDGE—
Union's Bacon 1, 21-28-20 ..... * 2123
WASCO—
Cities Service's Core Hole 1, 16-28-24 ..... * 2550

KERN COUNTY

BELRIDGE—Belridge Oil Co.'s No. 27-8, dr shale 3655 ft; No. 27-64, 27-27-20, rigging up; No. 35-8, 35-27-20, dr shale 1945 ft; No. 35-33, 35-27-20, dr shale 2900 ft; No. 35-48, 35-27-20, dr shale 4100 ft. Tom Cannon's Fay 1, 18-20-22,

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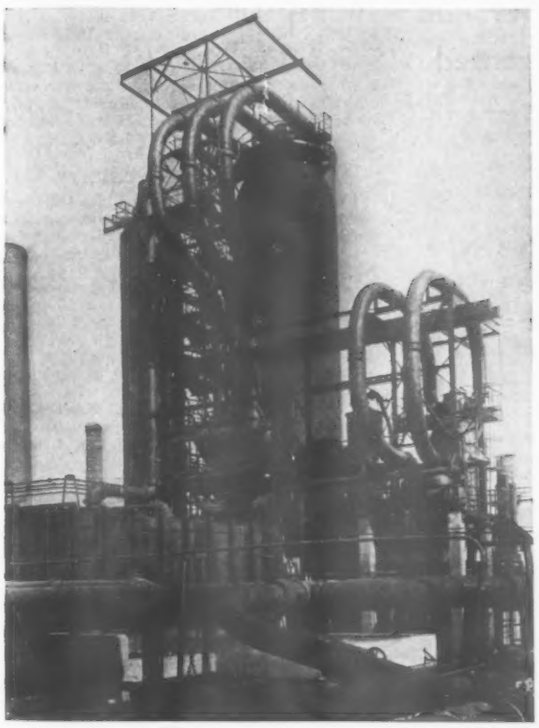

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DIAMOND CHAINS — NIKROME SHAFTS

rig. Casa Mira Oil Co.'s Theta 2, 29-28-20, rig. Continental's Result 2, 36-27-20, rig. General Pet.'s Berry 1, 30-28-21, sr 3605 ft. Ohio's Blomer 1, 36-27-20, sd 5655 ft. Reward Oil Co.'s Associated 4, 34-27-20, dr shell 3725 ft. Richfield's Belrdge 1, 22-27-20, bailing water, td 6640 ft, may deepen. Standard's McPhail 2, 36-27-20, dr hard shale 4540 ft. Texas' Martin 1, 22-27-20, dr brown shale 4545 ft. Union's Belridge 17, 36-27-20, 9-inch cas cmt 4980 ft. K. C. Wallace's No. 1, 32-29-21, dr shale 4138 ft.

BUENA VISTA HILLS—Federal Drilling Co.'s No. 6, 20-31-24, sdtr liner 5232 ft.

BUTTONWILLOW — Wilshire Oil Co.'s Nordon 1, 7-29-24, co 6583 ft.

DELANO — Chanslor-Canfield Midway Oil Co.'s Villard A1, 31-25-28, fsh for bit, td 1420 ft.

DEVIL'S DEN—Tom Hannon's No. 1, 25-25-18, dr 2626 ft. Standard's Alferitz 1, 14-25-18, dr hard shale 1435 ft.

EDISON—Sy Wicker's No. 6, 12-30-28, dr shale 1200 ft.

McKITTRICK — California Oil Producers' Wisecarver 1, 30-30-22, sd 5545 ft.

SEMITROPIC—Shell's Williams 1, 17-27-12, running string of small cas, td 9679 ft, will cmt cas at 9560 ft.

WEED PATCH—Alpine Oil Co.'s Di Giorgio 1, 13-31-29, lcn. Mohawk Oil Co.'s Wharton 1, 32-30-29, sd 5966 ft. Shell's Morris 1, 32-30-29, dr shale 2635 ft; Porter 1, 29-30-29, dr shale 5540 ft; Porter Day 1, 29-30-29, dr shale 7320 ft.

SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp.'s Augur Permit 191-1, 24-4-29, swabbing water and oil, td 4191 ft, well will not flow.

CUYAMA—Cuyama Valley Oil Corp.'s No. 1, 12-10-27, rigging up rotary.

GATO RIDGE—Barnsdall's Tegnazzini 1, 9-8-32, fsh for drill pipe 6030 ft.

GOLETA—General Pet.'s Chase 1, dr shale 1800 ft; More 3, dr 4500 ft.

ORELLA—General Pet.'s Erburu 10, rig. Prairie Oil & Gas' El Capitan 1, dr hard brown shale 2768 ft.

SANTA MARIA—O. C. Field Gasoline Co.'s Bradley 1, off production, pumped some oil, td 5267 ft. Western Gulf's Bradley 1, 5-9-33, dr shale 5550 ft.

VENTURA COUNTY

FILLMORE—Associated's Young 1, 16-4-20, lcn.

HOPPER CANYON — George H. Hadley's No. 1, 13-4-9, bailing mud and oil 1015 ft.

OJAI — Dreadnaught Oil Co.'s Canet 1, dr shale 2045 ft. Knudsen and Schmidt's No. 1, 12-4-23, dr hard sand 1000 ft.

OXNARD—Magu Syndicate's Utt 1, lcn.

RINCON — Chanslor-Canfield Midway Oil Co.'s Hobson A2, 23-3-24, dr shale and oil sand 8265 ft. Continental's Grubb 1, 23-3-24, rigging up rotary.

SANTA MONICA MOUNTAINS—Olympic Corp.'s Calabasas 1, 18-1-17, shutting off water, td 5685 ft.

SANTA PAULA—San Pedro-Pt. Fermin's Kellerman 2, dr shale 2745 ft.

SESPE—Merchants Petroleum Co.'s No. 1, 1-4-20, dr shale 525 ft. Superior's Kirtlan 1, 15-4-21, dr shale 5450 ft.

TIMBER CANYON—Petro Well Producing Co.'s No. 4, 18-4-20, will deepen from 1100 ft.

VENTURA—Prairie Oil and Gas' Sexton 1, 30-3-22, dr shale 8650 ft.

MISCELLANEOUS

FRESNO COUNTY—Associated's Mitchell 1, 22-21-15, dr shale 3965 ft.

KINGS COUNTY—L. W. Seymour's No. 1, 10-23-16, re-cmt 8⅝-inch cas 1010 ft. Kettleman Lakeview Oil and Gas Co.'s No. 1, 11-23-19, co 1300 ft.

MENDOCINO COUNTY — Twin State Oil Co.'s Soldani 1, 14-12-17, dr shale 5965 ft.

SAN LUIS OBISPO COUNTY—Paso Robles Synd.'s Emerick 1, 34-27-11, co 3910 ft. Continental's Hellman 1, 26-25-11, dr shale 4340 ft.

SANTA CRUZ COUNTY—Wellton Oil & Gas Co.'s Galletly 1, will test showings, td 2820 ft, may run string of cas to 2715 ft.

TULARE COUNTY — Big Four Drilling Co.'s No. 1, 29-23-27, fsh for bit 4330 ft. Ducer Drilling Co.'s Zimmerman 1, 14-24-17, sdtr iron 2180 ft. Inland Valley Oil Co.'s Smith-Rea 1, 24-17-24, co 2060 ft.

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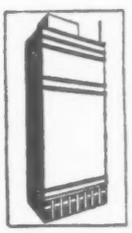

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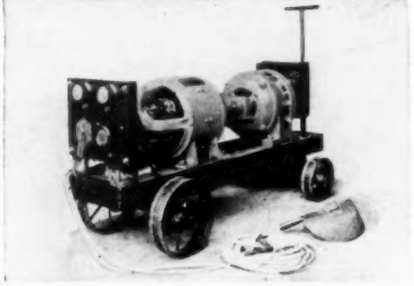

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SOUTHERN CALIFORNIA

ALHAMBRA—Fred H. Hammer's Huntington Land 1, 24-1-13, dr shale 3000 ft.

BELL—Cudahay Community Oil Assn.'s No. 1, 30-2-12, dr out cmt, td 510 ft.

CORONA—Western Gulf's Abacherli 1, 12-3-8, dr shale 2115 ft.

CULVER CITY—Olympic Oil and Realty Co.'s No. 1, 14-2-15, co 4837 ft. Taylor Oil Co.'s Culver 1, 12-2-15, lcn; No. 1, 12-2-15, dr shale 5600 ft.

EL MONTE—Rancho Oil Corp.'s Harmon 1, 30-1-11, dr shale 3635 ft.

FULLERTON — Standard's Bastanchury 1, 21-3-10, dr hard sand 7800 ft.

HERMOSA BEACH — Calico Royalty Series' Calico 3, 6-4-14, dr out cmt 711 ft. California Ventura Oil Co.'s Sadler 2, 31-3-14, pumping oil and water, td 3330 ft. Corniel Oil Corp.'s No. 1, 31-3-14, co 525 ft. Westwood Pet. Co.'s No. 1, 6-4-14, rigging up.

NEWHALL—Consolidated Oil Co.'s Hammond 1, 8-3-16, dr hard sand 2465 ft. York and Smullin's Clampitt 6, 13-3-16, cellar.

NEWPORT—T. F. Gesell's No. 1, 29-6-10, dr shale 880 ft. Standard's Irvine 1, 26-6-10, dr hard shale 3625 ft.

OLIVE—Texas' Olive Community 1, 7-4-9, dr hard sand 2740 ft.

PLAYA DEL REY — Mesmer City Realty Co.'s No. 1, 24-2-15, lcn. West Port Oil Co.'s No. 1, 27-2-15, fsh for drill pipe 5590 ft.

PUENTE—C. F. Shannon's No. 1, 3-2-10, new rig, td 4620 ft. Rucker and Croul's Grazide 2, 22-2-10, dr gray sand 1626 ft.

REPETTO HILLS—Texas' F. M. 1, 4-2-12, dr shale 1900 ft.

SAN FERNANDO — Mack Oil Co.'s Deer Lake 1, 6-2-16, rig. San Val Oil Co.'s No. 1, 14-4-16, sr 2065 ft, will cmt cas.

SANTA MONICA—Hines Pet. Corp.'s No. 1, 8-2-15, dr shale 800 ft.

SAN JUAN CAPISTRANO—Okay No. 2's Foster 2, 13-8-8, repairing rig, td 5220 ft.

WILMINGTON — Wilmington Consolidated Oil Co.'s No. 1, rigged up.

ARKANSAS

Completions

LITTLE RIVER COUNTY—			
Buck Oil Co.'s Taafe 1, 25-12-32....	*		2919
OUACHITA COUNTY—			
J. D. Reynolds, Pace 1, 21-15-19....	40		2204

CHICOT COUNTY—H. R. Smith's Lytle 1, 31-18-3, cemtd back to 2865 ft, arr whipstock old td 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s, Underwood 1, nw ne 4-20-8e, dr shale 805 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9, sd 3740 ft.

CRAWFORD COUNTY—Citizens Gas Co.'s Hood 1, ne se 18-9n-32w, lcn.

DALLAS COUNTY—John James, Tr.'s, Fordyce Lbr. Co. 1, ne nw 11-9s-15w, 10-inch 176 ft, dr rock 1975 ft. E. C. Brewer, Tr.'s Hillman 1, se ne 20-10-13, 10-inch 88 ft, tested sw 2450-54 ft, coring rock 2542 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, cas pulled, hfsw, td 3756 ft.

GRANT COUNTY — Spann & McClung's Sarah Page 1, sw nw 3-3-12, sd 438 ft.

HOT SPRINGS COUNTY—John Watkin's, Tr.'s, Cunningham 1, 11-5-16, sd 100 ft. Cleary Bros. et al's Hinson 1, 19-4s-16w, 11 ft sand, sd 1604 ft.

JOHNSON COUNTY—Blackwell O&G Co.'s Wyver 1, 21-8-23, ta 5600 ft.

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, rig. McIver et al's Hattle 1, nw ne 1-20-26, 12½ cas 115 ft, dr 1105 ft. Smitherman & McDonald's Reed 1, se nw nw 16-15-22, 12½ cas 42 ft, tested 3 joints mud, show oil thru ds in 1 hour 1172-94 ft, cemtd 8¼ cas 1176 ft, wo cemt to harden, td 1194 ft.

LAWRENCE COUNTY—Marguerite Dev. Co.'s Broadway 1, 317-17-1, sd 45 ft.

LITTLE RIVER COUNTY—Buck Oil Co.'s Taafe 1, 25-12-32, tested small show gas much sw thru ds 2770-2919 ft, sw abn, td 2919 ft. Fay Roberts Oil Co.'s Russell 1 ,nw nw 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd 3610 ft.

MADISON COUNTY—J. W. Baxter's Hallem 2, cent sec 17-16-22, sd 405 ft; Hallem 3, ne sw 1-17-26, sd 42 ft.

MILLER COUNTY—E. & F. Oil Co.'s E.

L. Beck 1, 36-15-26, 6⅝ cas 2792 ft, 4½ cas 2957 ft, tested sw 2961 ft, sd 2968 ft. Lens et al's Johnson 2, 24-15-26, coring 4615 ft; Johnson 3, ne nw 24-16-26, sd 2850 ft. Bullock Oil Co.'s Hervey 1, 2-15-26, ds stuck 2832 ft. East Texas O&G Co.'s Hervey 1, 2-15-26, sd 900 ft. Gusher Bend Oil Co.'s Adams 1, nw nw 24-14-26, 10-inch 115 ft, dr 2172 ft. O'Mara et al's Person 1, 31-15-25, lcn. Fitzwater et al's Beck 1, sw se 33-15-26, 10-inch 85 ft, sd. Salzer & McRae's Rose 1, ne nw 9-16-26, 10-inch 98 ft, sd 475 ft. J. D. McRae's Smith 1, nw se 28-15-26, dk.

OUACHITA COUNTY — Belmont et al's Dean 1, 16-15-17, top red beds 2765 ft, sd with junk in hole 2907 ft. Copenhaver et al's Elliott 1, se se 11-15-17, sd 2137 ft. Wesson & Bonner's Wesson 1, sw nw 22-15-19, 6⅝ cas 2083 ft, wo power to pump 300 ft fluid in hole, td 2169 ft. J. D. Reynolds' Pace 1, ne se 21-15-19 (Stephens townsite), 10-inch 44 ft, Nacatosh 1506-11 ft, did not test, cored oil sand 2152-58 ft, 6-inch 2149 ft, pumping 40 bbls pipe line oil, td 2204 ft; Grayson 1, 21-15-19, 10-inch 42 ft, cored Nacatosh 1502-14 ft, did not test Nacatosh, dr 1610 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, show heavy oil 567 ft, sd 2110 ft. E. R. Henderson's Lee 1, sw se 31-8s-24w, dk.

POPE COUNTY—Ark. La. P. L. Co.'s McFadden & Brooks 2, ne nw 15-9-21, 13⅜ cas 1900 ft, tested 1 mil ft gas 3285 ft 8⅝ cas 3415 ft, dr shale 3710 ft (corrected depth); Baird 1, se nw 11-7n-20w, sp dr shale 160 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Ark. Valley Gas Co.'s Turner 1, se se 27-5n-30w, lcn. Waldron O&G Co.'s J. G. White 1, sw nw 17-3n-29w, gas show 400 ft, sd 1815 ft.

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, sd after testing sw 3515 ft.

UNION COUNTY—Hickman et al's Hogg 1, 35-16-17, top Graves sand 2351 ft, top Red Beds 2779 ft, sd 3092 ft. Rice et al's Whatley 1, 7-17-13, sd 1520 ft. Marine Oil Co.'s W. B. Thompson B-2, se ne 10-18-13, 10-in 317 ft, dr 2275 ft. Southern Prod. Co.'s Wingfield 1, se nw 16-19-15, 10-in 210 ft, skidded over 26 ft east for new hole. Wilson & Chapman's Hadley 1, ne sw 3-18-13, 10-inch 102 ft, top Nacatosh 2300 ft, top Meekin sand 2550 ft, top red beds 2933 ft, tested dry thru ds 3535-51 ft, cored red beds 3549-51 ft. C. H. Murphy et al's Union Sawmill 1, nw sw 18-18-13, rig.

WASHINGTON COUNTY—Taylor et al's Runny 1, 1-13-29, sd 1702 ft. Lincoln Lease Holding Synd.'s Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-12, sd while fsh cas, td 5710 ft.

MISSISSIPPI

Completion

NESHOBA COUNTY (Philadelphia Dist.)—Collins et al, Carter 1, 29-11n-12e .. * 2053

CLARKE COUNTY (Quitman Dist.)—Gulf Ref. Co.'s Box 1, nw se 11-2n-15e, elev 221 ft, mov in rig.

CLAY COUNTY—Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev 270 ft 13⅜ cas 1389 ft, dr sandy shale with CT 2892 ft.

COVINGTON COUNTY (Collins Dist.)—Miss. Gulf O&G Co.'s Pope 1, nw ne 35-8n-16w, 12½ as 126 ft, top Wilcox 2100 ft, sd in sandy shale 3000 ft. United Prod. Corp.'s McIntosh 1, sw ne 5-8n-16w, elev 321.5 ft, 12½ cas 805 ft, fsh frozen ds, td in Wilcox 3378 ft.

CHICKASAW COUNTY — Hightower & Golsan's Fleming 1, 20-13s-3e, sd 1562 ft.

GRENADA—Carter Oil Co. et al's Dubard 1, nw nw 18-22-4e, top Selma chalk 1787 ft, top Eutaw 2612 ft, tested artesian water no gas thru ds 2974 ft, dr gray water sand 2987-89 ft, arr deepen.

HINDS COUNTY (Jackson Dist.)—Miss. Pet. Co.'s Solvent 1, sw sw 14-5-1w, top Midway shale 2970 ft, ta with junk in hole, td 3042 ft. Gulf Ref. Co.'s McLaurin 1, sw ne 30-6-2e, top Midway shale 2392 ft, 9-inch 2466 ft, top chalk 2485 ft, cemt bot. hole to regain returns, td in chalk 2646 ft; School Board 1, ne sw 16-6-1e, elev 331 ft, 13-inch cas 108 ft, dr Wilcox 2556 ft.

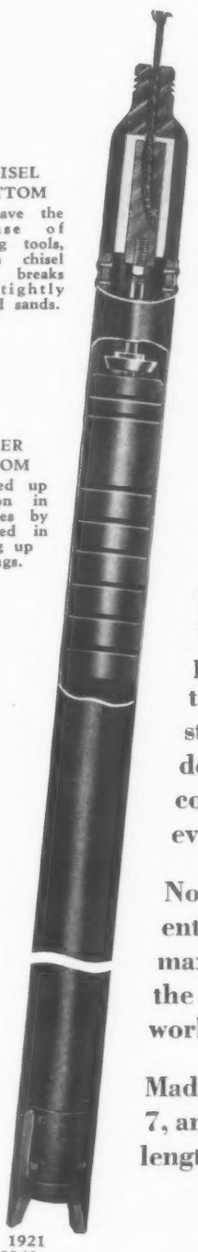
JASPER COUNTY (Bay Springs Dist.)—

THE Miller Sand Pump

CHISEL BOTTOM
will save the expense of running tools, as its chisel shape breaks up tightly packed sands.

BAILER BOTTOM
will speed up production in cavy holes by time saved in picking up cuttings.

STAR BOTTOM
used for cutting the sand loose and preferred by some to the Chisel Bottom.



Sand Pump Bottom shown in place in pump illustrated

March 1, 1921
No. 1370340
January 20, 1925,
No. 1523604

With the enormous suction in the Miller Sand Pump you bring out a load of sand and mud each time you run. You can depend on it to thoroughly clean your well in a very little time. You have your choice of four types of bottoms: Chisel, Bailer, Star, and the regular Sand Bottom—all interchangeable.

In the MILLER the sand line is run through bail connecting directly to the plunger, eliminating a rod and permitting use of a 25 or 30-foot tube. Built to stand abuse. Constructed for economical operation; designed for greater efficience.—the combination tool with a bottom for every job.

Now is the time to conserve your present wells, by cleaning out, to get their maximum production. The Miller is the Oil Man's choice for fast and sure work.

Made in 2½, 3, 3½, 4, 4¼, 5, 5½, 7, and 9-inch sizes, with 20, 25 and 30-ft. lengths. Write for folders and prices.

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PARKERSBURG MACHINE Co. PARMACO PARKERSBURG, W. VA. U.S.A.

The House of Courteous Service

Bay Springs Pet., Inc., J. H. Keyes 1, nw ne 21-2n-10e, 15½ cas 104 ft, sd.

KEMPER COUNTY (De Kalb Dist.)—W. W. Jones' Rosenbaum 1, lcn not given, dk.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10s-4w, rig.

MADISON COUNTY (Jackson Dist.)—Central O&G Co.'s Cameron 1, se se 11-9n-1e, 10-inch 201 ft, 6⅝ cas 1532 ft, top Midway(?) 2506 ft, dr sandy shale 2800 ft.

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, sw ne 2-15-19, sd in brown sand 3007 ft. P. J. McAlpine's Cowart 1, ne sw 2-12-19, 10-inch 694 ft, 8¼-inch cas 1248 ft, dr sandy lime 1288 ft. Associated Royalties' School Board 1, sw se 16-15-17, sd 60 ft. Amory Pet. Corp.'s Harris 1, nw nw 18-13s-17w, 10-inch top Paleozoic rock 478 ft, dr black shale 715 ft.

NESHOBA COUNTY (Philadelphia Dist.)—Collins et al's Carter 1, se se 29-11n-12e, elev 456 ft, 12½-inch cas 97 ft, top Selma chalk 1620 ft, dry abn in Selma chalk 2053 ft.

RANKIN COUNTY (Jackson Dist.)—Love et al's Muse 1, se se 32-7-4e, 12½ cas 600 ft, dr Wilcox 1900 ft. Love Pet. Co.'s Moore 1, se nw 28-6-2e, sd 900 ft. Millstein O&G Co.'s Gammill-Hartfield 1, sw ne 6-5-2e, hf fluid, wo 2500 ft.

SMITH COUNTY (Raleigh Dist.)—Pocahontas Nat. Gas Co.'s Adams Banks Lbr. Co. 1, ne sw sw 10-3n-7e, elev 425 ft, rig.

WARREN COUNTY (Vicksburg Dist.)—Dixie Pet. Co.'s Clark 1, nw nw 6-16n-5e, 12½ cas 77 ft, arr ds test, td 2232 ft. Vicksburg O&G Co.'s Dornbusch 1, sw ne 8-18n-5e, sd 1600 ft.

WEBSTER COUNTY — Cumberland Oil Co.'s Henley 1, 15-21-11, ta 1865 ft.

WINSTON COUNTY (Louisville Dist.)—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13n-14e, dry thru ds 2097 ft, sdtr bit, td 2157 ft (corrected depth).

YALABOUSHA COUNTY (Water Valley Dist.)—J. D. Collett et al's Blackmer 2, sw nw 14-11s-4w, 12½ cas 103 ft, ds recovered, cemtd 8⅝ cas 2426 ft.

McCollum Exploration Co.

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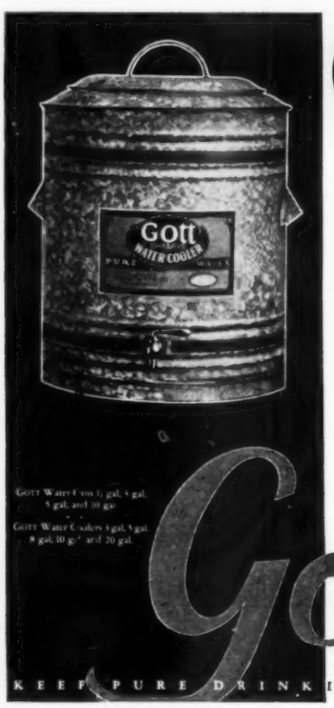

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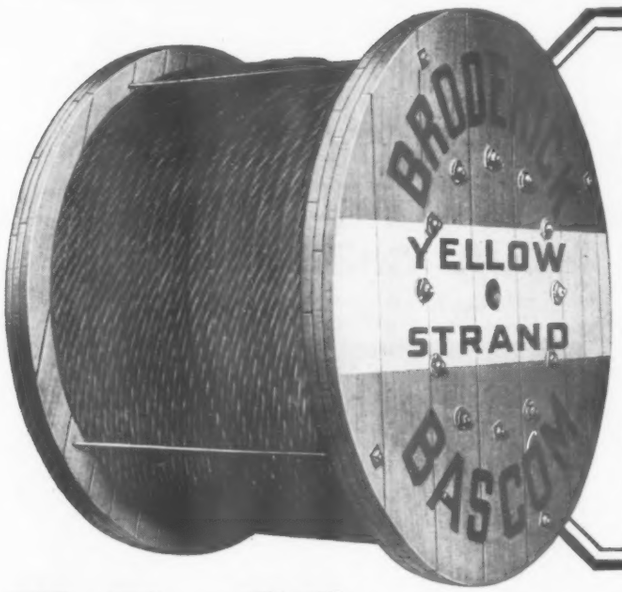

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Send for Catalog 40

BRODERICK & BASCOM ROPE CO.

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Yellow Strand Rotary Drilling Lines

P-13

A Sullivan Drilling Outfit was transported 700 miles into India, to carry on abandoned hole down to 6000 feet.

Sullivan Drills

now making 25-in. holes

starting with 21½-inch casing, Sullivan Drills are able to carry the hole two strings farther than other equipment. Substantial savings now available on deep holes.

Oil men all over the world look with keen interest at the big holes now being drilled with Sullivan Core Drills. Their ability to make 25-inch holes lends new significance to all the economies of core drilling.

One of these holes was started recently in New Zealand. It was spudded in with a 25-in. bit. Twenty-two days later 303 feet of 21½-in. casing was cemented through difficult agglomerates. Two months and nine days later, 16-in. casing was cemented at 1956 feet.

There are two important reasons why oil men would rather drill the wildcat with a Sullivan Drill.

(1) A hole drilled with a Sullivan can always be carried two strings of casing farther than the same hole drilled with other equipment. This is due to the ability of the Diamond Drill to work through smaller casing. (2) If the driller knows in advance, how far he is going to drill, he can start with a smaller hole by using a Sullivan Drill, greatly reducing the cost of the hole.

Core drilling on deep holes, and for structure testing is developing rapidly. If you do not have the latest information send for Booklets 85-H (Deep Tests and Wildcats), 85-K (Structure Testing).

SULLIVAN CORE DRILLS

Sullivan Machinery Company

713 WRIGLEY BLDG.. CHICAGO

Agent for Oklahoma and Kansas, GEO. E. FAILING, Enid, Oklahoma

MAKE AN ACTUAL TEST

Install DAYTON COG-BELT DRIVES AND CHECK RESULTS

By making an actual factory test of Dayton Cog-Belt Drives and checking results you'll find that Daytons will solve your power transmission problems. You'll find that Daytons are easier on bearings. Dayton Cog-Belts grip the pulley grooves firmly but without tension. They're die-cut for precision, and they do not squash or buckle. You'll find that Daytons will regularly show smoother—more accurate—speed control. They're built true, and they *stay* true. They're pre-stretched *permanently*. You'll find Daytons will turn out a more uniform product—stand up better against heavy loads—prevent stoppages for servicing and replacements—take up less floor space and use smaller pulleys.

There are many other sound reasons for the better performance of Dayton Cog-Belt Drives—reasons that we'll explain in full detail if you'll write, outlining your problems.

Look at the illustrations. Note the strong points of Dayton Cog-Belt construction. Then send for a Dayton Cog-Belt Catalog and for a sample section of the Cog-Belt itself. Write today.

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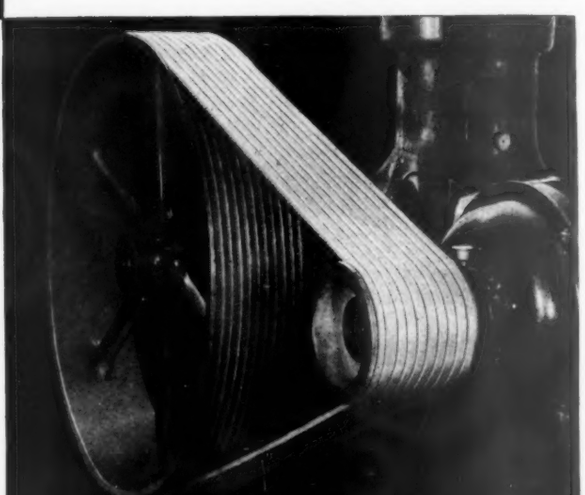

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Dayton COG-BELT DRIVES

OUTSTANDING ADVANTAGES OF DAYTON COG-BELT DRIVES

1. Minimum space required
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8. Quiet
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10. Easy on bearings

New Equipment for the Field

MACHINERY - TOOLS CATALOGS - BOOKS

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New Motor Starter

Louis Allis Company

Louis Allis Company, Milwaukee, Wisconsin, has recently placed on the market the first air-break "explosion-proof" motor starter developed, the company announces. This starter, known as Type E Form AAA is built on the same principle as the Louis Allis "explosion-proof" motor.

The starter proper consists of the usual across-the-line air-break magnetic contactor with overload and under voltage protection. Strength to withstand explosions is provided by a heavy cast iron case. The cast iron cover is held on the case by 10 heavy cap screws. Wide machined surfaces and tight joints between the case and cover offer provision for cooling and prevention of flame escape even if the explosive vapors enter due to "breathing" and are ignited inside the starter.

The switch is approved by the Underwriters' Laboratories, and has been placed in "Class 1, Group D," hazardous locations. It is for use in oil refineries, natural gasoline plants, chemical plants, or wherever the surrounding atmospheres may be flammable from the presence of explosive vapors or combustible dust.

The new Type E Form AAA motor starter is designed and built to eliminate the oil being used in oil-immersed starters in hazardous areas. It is further designed to prevent damage even though an explosion should occur inside the starter.

Heavy Electrode

General Electric Company

General Electric Company announces a new heavily coated electrode, designated type R, for welding. This particular type of electrode is composed of .13 to .18 carbon steel covered with a heavy coating of cotton braid impregnated with an arc stabilizing flux, and will be available in diameters from ⅛ to 3/16-inch by 18-inch length.

Metal deposits of this electrode will have high tensile strength and is said to produce a homogeneous structure resulting in a ductile weld. This is caused by the fact that, during the arc transference period, the metal is in a protective atmosphere because the electrode itself burns away quicker than the coating and excludes those elements prevalent in atmosphere which cause some undesirable results when the use of an uncoated rod is used.

Extreme arc stability and high arc voltages permissible from this type of electrode produce a high speed of welding for certain applications.

The new electrode is recommended in the field of pipe line welding where speed and ductility are essential requirements.

New Tubing Retractor

J. H. McEvoy & Company

J. H. McEvoy & Company, 600 Milby Street, Houston, announces a new type tubing retractor, the purpose of which is to support the tubing and prevent the necessity of killing a well in order to renew a valve or a cut-off connection. In case of a fire nearby, a flowing well may be

McEvoy Tubing Retractor

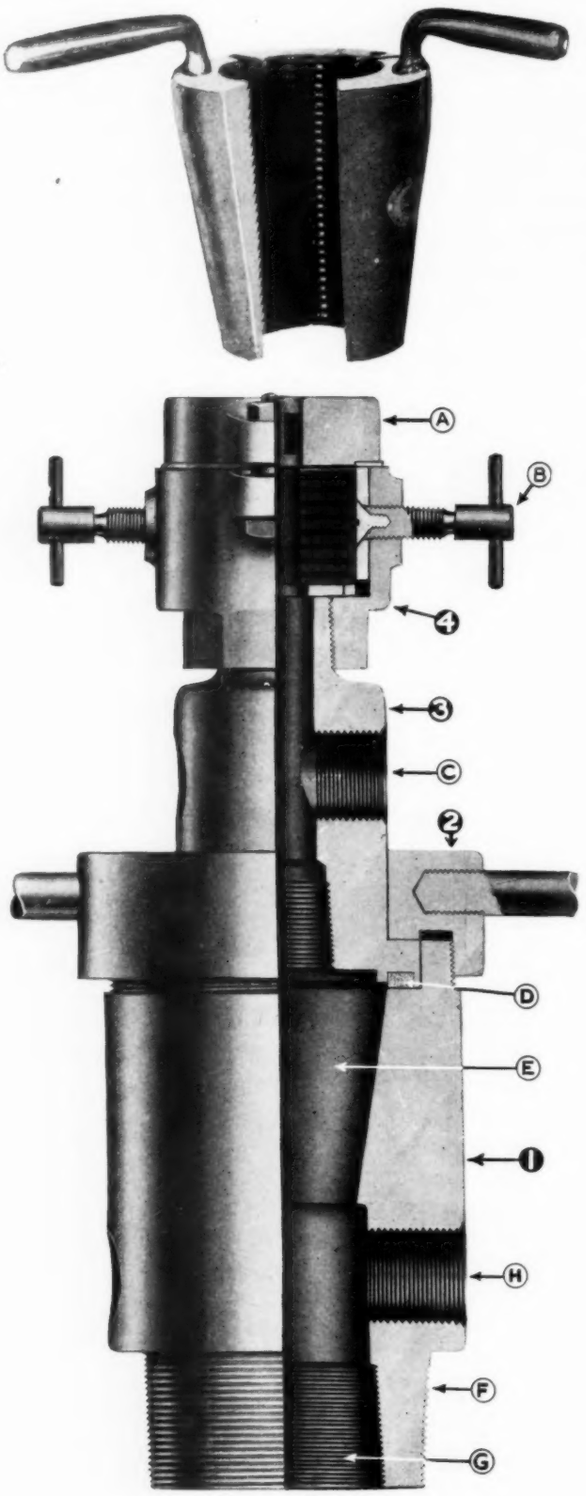
quickly shut; or in case the well itself should catch fire it may be quickly shut in by remote control by a few turns of a hand wheel in case of a sign of trouble, thereby leaving the master gate valve free to be closed.

The latest design of the McEvoy tubing retractor has a

cross at the top. The tubing is supported below the master gate valve, the retractor separating the tubing sufficiently to allow closing. This relieves pressure from the manifold while any necessary repairs are being made. The well may be flowed either through the tubing or casing or both at the same time. The complete operation of the retractor is made in as little as 30 seconds.

All working parts are completely enclosed to protect against corrosion from outside exposure. It is furnished, where desired, with remote control. It is used on wells from low pressures up to 2475 pounds per square inch. The complete assembly, including the upper cross, is tested to 3500 pounds pressure.

J. H. McEvoy & Company's Houston headquarters will furnish more detailed information on this new type retractor upon request.



All-In-One Tubing Head

All-In-One Tubing Head

Gulf Coast Machine & Supply Company

Gulf Coast Machine & Supply Company, of Houston and Beaumont, Texas, has designed, developed and manufactured a new tubing head for use on pumping wells, wells flowing through tubing and for wells using air or gas lift.

The head proper is made entirely of forged steel, forged from billet steel in the company's plant at Beaumont, and combines casing head, bowl and slip, tubing suspension device and polished rod stuffing box. It is compact and is designed to give the operator added speed in running rods and tubing.

The head is made in two types. Type "A" head is for use on wells where no tubing catcher, packer or seal is run on the tubing, the tubing being merely suspended from the top of the well in the tubing hanger. Type "B" head is for use on wells where a tubing catcher, packer or seal is run on the tubing.

The construction of the two types is the same except that the body of the Type "B" is reamed to the same inside diameter as the casing on which the head is placed. A split bushing or spider is provided to serve as a slip bowl, and may be removed to allow passage of the catcher, packer or seal.

The company will furnish complete details on this new combination head upon request to the headquarters at Beaumont, Texas, or to the Houston branch, 305 M. & M. Building.

Mud Flex

The Sullivan Company

The Sullivan Company of Memphis and Montreal has recently announced an addition to the galaxy of Sulco Products. Mud-Flux is the name of this new product which is compounded for the specific purpose of facilitating the handling of the mud problem in the oil fields, It is a liquid chemical composition of which has been tested, and used with demonstrated results.

Maintaining a mud of the desired consistency, a consistency heavy enough to drill the well under control and heavy enough to prevent gas cutting and feathering out, has been expensive in lost circulation, especially in heavy gas areas.

Mud-Flux is a liquid used in the proportion of one gallon to approximately 10 barrels of mud. It is injected into the slush to enable the operator to make a mud of any weight, since it cuts down the viscosity and reduces the heaviest muds to a liquid easily pumped, breaking down gas bubbles and eliminating feathering as encountered heretofore. Mud-Flux it to bring the mud into a more compact mass, fluxing it into a flowing consistency.

The Sullivan Company is also the originator of Gelite, liquid black to thicken the mud instead of thinning it out.

Keeping tank farms looking like new!

MORE companies every day are finding that keeping tanks clean becomes a much smaller item in the maintenance budget when Oakite materials and methods are used.

Regular washing down with an Oakite solution keeps tank exteriors free of all streaks and films. Little effort is required because hand brushing and scrubbing is reduced to a minimum. Painted surfaces stay bright and new looking.

This and other money-saving cleaning suggestions are described in more detail in a booklet, "Oakite in the Oil Industry." Write for your copy.

Oakite Service Men, cleaning specialists, are located in the principal industrial centers of the U. S. and Canada

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Industrial Cleaning Materials and Methods

AN "AMERICAN" IN OKLAHOMA

AN "American" Oil Well Pumping Unit is on the job at the Carter Oil Company plant at Oilton, Oklahoma. This is a No. 4-A 1822 unit, installed in a well approximately 2500 feet deep, using 2-inch tubing and ¾-inch rods, and pumping on a 24-inch stroke. This particular unit is direct-driven by an electric motor.

"American" Oil Well Units provide for a wide variance in the type of drive and are designed for a wide range of conditions. They are totally enclosed, compact units. Gears and pinions are oil immersed, and all bearings except two are automatically lubricated. Power consumption is small, and they are efficient and dependable in performance.

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THE AMERICAN WELL WORKS

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Manufacturer and Supply Dealer Notes

▼ ▼ ▼

Norvell-Wilder Supply Company announces the location of a store with adequate staff at Kilgore, Texas, to serve the new East Texas area.

Johnston Formation Testing Corporation, El Dorado, Arkansas, has opened a branch location at 411 North High Street, Henderson, Texas, to serve the new East Texas fields. S. P. Bedingfield, Louisiana representative, is in charge of this new district location for the company.

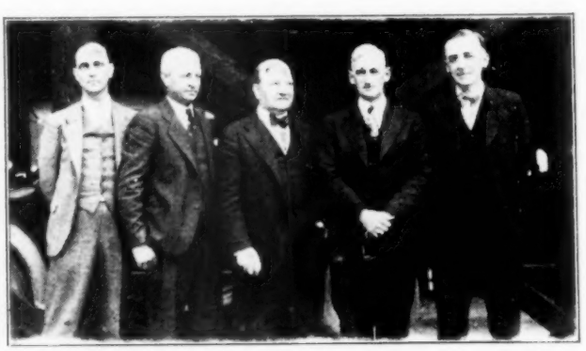
Speed & Service Iron Works, Houston, has opened a service machine shop at Joinerville, Texas, seven miles northwest of Henderson.

The Brewster Company, Shreveport, has recently opened a service branch at Henderson, Texas, to serve the East Texas fields. This shop, in charge of O. A. Price, has a floor space of 40 x 120 feet, for servicing Brewster bits and coring equipment.

Watson-Stillman Company, Roselle, New Jersey, has appointed The Moorlane Company of Tulsa as exclusive representative for the sale of hydraulic machinery and accessories in Oklahoma. The Moorlane Company covers the industries of this section with a staff of field engineers.

William Powell Company, Cincinnati, manufacturers of Powell valves and engineering specialties, announces the appointment of Howard Butt as manager of the engineering and export department, office at 50 Church Street, New York City.

Gulf Coast Tank Company, Houston, through V. B. Hughes, president, has recently incorporated V. B. Hughes and Company, with offices at 1016 Marine building, Houston, for the purpose of handling a line of oil field specialties. Gulf Coast Tank Company's organization will handle the newly formed company.



Officials of The Texas Creosoting Company are shown here at a recent conference held at the general offices of the company at Orange, Texas. They are, left to right: Frank Mayfield, superintendent of the Houston plant; L. B. Manley, sales manager; R. S. Manley, president; D. E. Roach, sales promotion, and Coke Tilley, superintendent of the Orange plant.

William T. Graham, superintendent of field construction, A. O. Smith Corporation, Milwaukee, travelled 80,000 miles in the past 1½ years by airplane, following the adoption by the company of a modern method of keeping in touch with construction crews operating simultaneously in all parts of the country. A Waco "10" plane, powered with a Wright Whirlwind 220 horsepower motor, is being used by him for this work. Decision to travel by plane followed an inspection trip of four weeks, covering 6000 miles, in which Graham was riding between jobs three weeks and actually working only one week. While Graham was a licensed pilot before the purchase of the plane by his company, the Waco "10" was equipped with dual controls, and he was accompanied by another pilot on the first few trips. Only one trip has been necessarily abandoned since he started using the plane and this was in Wyoming when the temperature was 40 degrees below zero.

Babcock & Wilcox Tube Company, Beaver Falls, Pennsylvania, announces the publication of a 56-page catalog on Niroska KA2, seamless tubes and pipe. Niroska KA2 is an iron-chromium-nickel alloy steel produced under the Krupp Nirosta patents. A section is devoted to the chemical, physical and other properties of Nirosta KA2 steel, and the various analyses are given in tabular form. Throughout the booklet pictorial sections are devoted to showing the manufacturer of Babcock & Wilcox Company tubing, taking the materials from the laboratory through the shops. A section is given to the subject of "Corrosion Resistance of Nirosta KA2," "Stability of Elevated Temperatures," "Design of Tubes for High Temperatures," "Temperature Limits in Pressure Service," and other subjects of equal interest. The manufacturers will furnish a copy of this booklet to interested persons upon request.

The Chain Belt Company of Milwaukee announces a change in the personnel of its Cleveland, Buffalo and St. Louis offices. Mr. Smallshaw, formerly in charge at the St. Louis office took charge of the Cleveland office January 1. Mr. Thomas Crocker, manager of the Cleveland office, has been transferred to the Buffalo office, and January 15 took over the manager's duties at Buffalo. Mr. Frank Gary has been transferred from the Buffalo office to St. Louis.

The "HIGH TEST" Fence
for oil property

Cyclone Fence has stood the test and proved superior in quality, design and construction. Full gauge wire. Copper-steel throughout. Heavily galvanized. H-column line posts set full depth. Yet Cyclone Fence costs you no more. Your local Cyclone representative will give you an accurate estimate on your fence job without obligation. Get Cyclone prices before you buy fence. Phone, wire or write.

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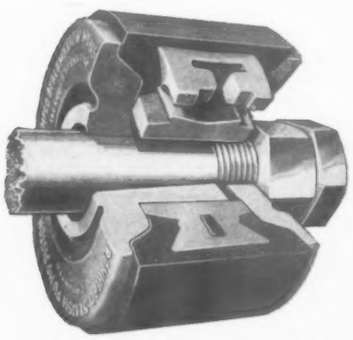
Cyclone — not a "type" of fence — but fence made exclusively by Cyclone Fence Company and identified by this trademark.

Ramhead
SLUSH PUMP PISTONS



Sold on Trial to Responsible Operators

We want you to test Ramhead Slush Pump Pistons for yourself, under your own conditions. Order a set on trial . . . put them to work . . . convince yourself that with Ramheads there is less friction and less slippage, that your piston expense and servicing is reduced to an absolute minimum.

Alamo Iron Works
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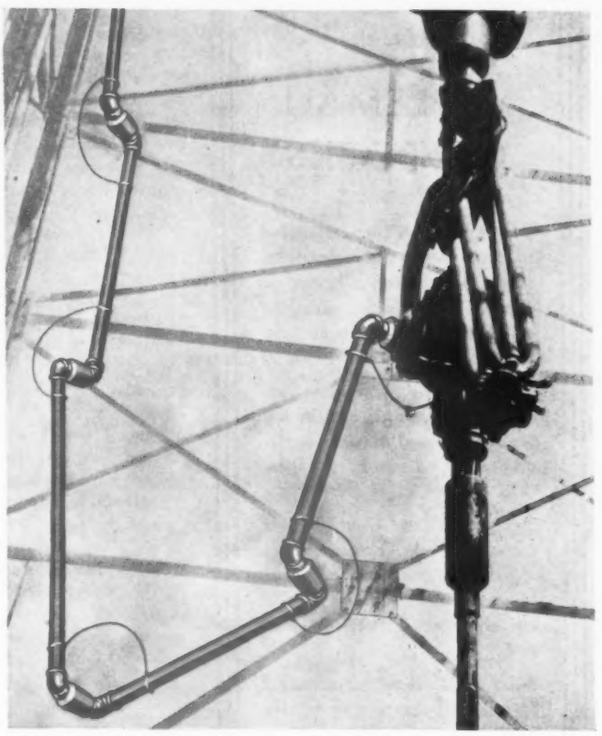

All-Steel Rotary Hose

Your hose troubles are over, once you install the GRANT All-Steel Rotary Hose. For GRANT engineers have produced a hose so strong, so flexible and so efficient that it works safely and dependably under all conditions—no matter how severe. Ball-bearing construction in the Swivel Joints, properly designed to help eliminate binding and vibration in the Hose, is a feature that operators will appreciate. Even under highest pressures, the joints swivel with ease. Many other advantages you should know about before you buy a hose. So ask for complete details.

A Close-Coupled and Compact Swivel Joint . . . . . .

Only 8 parts—providing compact unit. Parts easily assembled by men at rig when necessary. Provides a perfect SEAL under high or low pressure. Special alloy steel parts assure greatest strength. No restriction of circulation through joint or hose. Each joint thoroughly tested before leaving factory—assuring greatest dependability.

GRANT OIL TOOL CO.
2042-44 E. Vernon Ave., Los Angeles, Cal., U. S. A.

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LINER PULLERS
CEMENT HEADS
ENDURANCE BITS
STRAIGHT HOLE GUIDES
SAFETY AUTOMATIC PUMP PRESSURE RELEASE

Distributors:

Oil Well Supply Co., The National Supply Co's., Continental Supply Co., The Republic Supply Co. of Calif., Lucey Products Corp., American Steel Export Co., New York. **Gulf Coast Distributor:** Houston Oil Field Material Co.

See Our Exhibit at the Oil Equipment & Engineering Exposition Los Angeles, March 16-22

"USED WHERE PERFORMANCE COUNTS"

STRAIGHT

TO PAY SAND

with

APPLEMAN GUMBO BITS

The Appleman Bit is designed to give speed and a straight, clean hole. They always go *straight to pay sand*, affording a great saving of time and drilling costs.

Self-Sharpening Blades **are attained by hard facing in the concave shaped blades permitting wear on the back to retain cutting edges.**

Straight Water Courses **lead directly to the cutting edge, insuring rapid mixing and breaking up of cuttings to be quickly washed away in solution.**

Sidewall Cutting **is attained by the self-sharpening blades and their special design. This gives a clean and well-prepared sidewall "bored to size."**

Write for Complete Information

B. K. APPLEMAN
BEAUMONT, TEXAS

Squeaks From the Bull Wheel

"I have known you so long, doctor," said the patient at the end of his visit. "I do not intend to insult you by paying your bill. But I have arranged a handsome legacy for you in my will."

"That's very kind," the doctor replied. "Now please allow me to look at that prescription again. There is a slight alteration I would like to make in it."

W. Paul Gage, formerly president and general manager of the Pure Oil Pipe Line Company of Texas, writes the editor of Pure Oil News from his home in Dallas that he is just back from the hospital where he underwent an operation, and will be confined to his home for some weeks. He follows this information up with one of his good stories about the man who was slightly under the influence of liquor, dropping into church one Sunday morning, and finding a warm and comfortable pew, soon fell asleep. Later when the preacher had started to pray in a loud voice, the sleeper woke up in time to hear the Dominie say "And, pour out Thy richest blessings on the Pure and Humble," whereupon our sleepy friend inquired, "Why don't you say something for the Gulf, Magnolia and Texas Companies?"

Defendant (in loud voice)—Justice! Justice! I demand justice.

Judge (rapping for order)—The defendant will please remember he is in a courtroom.

Little Willie always has a snappy comeback. The teacher said to him, "This makes the fifth time I have punished you this week. What have you to say?"

And L. W. brightly answered, "I'm glad it's Friday, sir."

She was in Alaska looking over a fox farm. After admiring a beautiful silver specimen, she asked her guide: "Just how many times can the fox be skinned for his fur?"

"Three times, madam," said to guide, gravely. "Any more than that would spoil his temper."

She: "Where did you get that umbrella?"

He: "It was a gift from sister."

She: "You told me you hadn't any sisters."

He: "I know, but that's what's engraved on the handle."

Two friends met in mid-air.

"Fancy meeting you here!" cried one. "I'm falling from my airplane."

"That so?" replied the other. "I'm rising from my gas stove."

Diner: "Here's a piece of rubber tire in my hash."

Waiter: "No doubt. The motor is displacing the horse everywhere."

The minister called at the Jones home one Sunday afternoon, and little Willie answered the bell.

"Pa ain't home," he announced. "He went over to the golf club."

The minister's brow darkened, and Willie hastened to explain:

"Oh, he ain't gona play any golf. Not on Sunday. He just went over for a few highballs and a little stud poker."

"Did you hear that Jones is earning $20 a night playing his violin? Just think—$5 a string."

"Why doesn't he learn to play the harp?"

"Congratluations, my boy."

"But you just said that I flunked out of medical school."

"Ah, but think of the lives you have saved."

Ma Talltimber—I'm afraid Bud's learned to gamble at college.

Pa—Well, I hope he's finally mastered the study. His expenses while he's been learning it have been too much for me.

The Cynical One—Women age faster than men. They also lose their powers of memory first.

The Other One—Can you prove it?

The Cynical One—Yes; just notice how many women at the age of 30 have difficulty in remembering how old they are.

Angry Widow (after learning husband left her nothing)—I want you to take "Rest in Peace" off that tombstone I ordered yesterday.

Stonecutter—I can't do that, but I can put something underneath.

Widow—All right, put "Till I come."

A Kansas oil producer who had mortgaged his lease to the local bank was called in by the banker and told that the note was due and must be paid the following day. The oil man asked the banker: "Were you ever in the oil business."

The banker answered "No."

"Well, you are now," said the oil man, and walked out.

Lady—Can you give me a room and bath?

Clerk—I can give you a room, madam, but you will have to take your own bath.

Theatre Attendant—I shall have to ask you to leave if you persist in hissing the performers.

Smithers—Hissing? I w-w--ass- s-s-simply s-s-saying that the s-s-singing was s-s-superb.

SAFER, FASTER AND EASIER!

These Lowell "Red Face" Reversible Ratchets are just the thing for operating those hard-to-get-at Valves. Once a Lowell is in position it's a simple matter to **pump** a line open or closed.

No step-ladders needed and plenty of leverage for even the balkiest valve.

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WORCESTER MASS.

Costs Less - - - - - - Last *therefore* - - costs least - -

WASHINGTON STRUCTURAL STEEL DERRICKS are not cheap in first cost compared to a wood structure. But they are endowed with ability to give service, over many years on many wells. There's no rotting, warping, twisting or breaking, with Washingtons. Cost of removal and re-erection on a new location is generally less than the cost of the new wood required to replace breakage in re-erection of a wooden job.

Some of our derricks have already drilled 25 wells and are still in good working condition. This is the dividend of satisfaction that Washington Derricks pay on the investment. They cost less—last; therefore they cost least.

Why Experiment? Washington Derricks Will Drill Your Wells and Pull the Casing.

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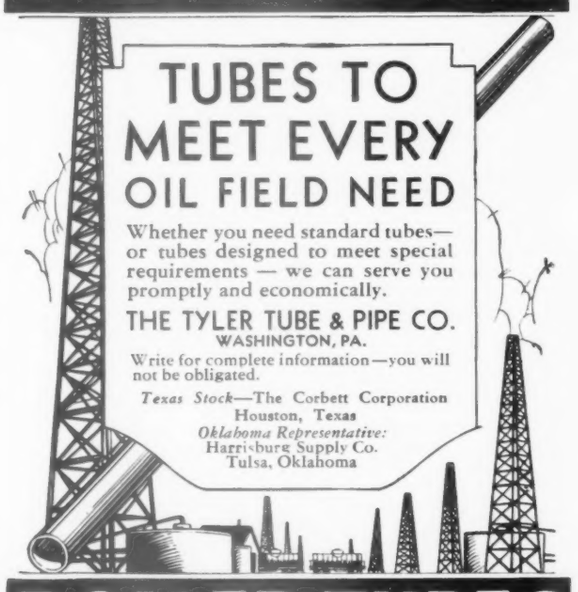

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Whether you need standard tubes—or tubes designed to meet special requirements — we can serve you promptly and economically.

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WASHINGTON, PA.

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Interior view showing Westcott orifice meters in use by Louisiana Gas & Fuel Company (a unit of the United Gas System) at the Guthrie Station of the Memphis Natural Gas Company near Fairbanks, Louisiana. These meters measure the flow through three 12-inch pipe runs.

Ready for the Big Flow

A modern station in every way—a station to be proud of; scientifically planned; thoroughly equipped; meticulously cared for—clean as a pin.

Enough Westcott orifice meter capacity to handle a maximum flow of gas of 125 million cubic feet a day, at 200 lbs. pressure.

Prepared, as a large-capacity station should be, for accurate registration.

To be ready at all times to show each day's exact deliveries and output, the owners and operators depend on the meter that has been the main dependence of the industry for 15 years.

All phases of measurement by Westcott orifice meters are fully described in Bulletin No. E-2.

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ERIE, PENNSYLVANIA
Ironcase, Tinned Steel Case and Orifice Meters

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The World's Largest Manufacturers of Gas Meters and Allied Apparatus
Established 1816

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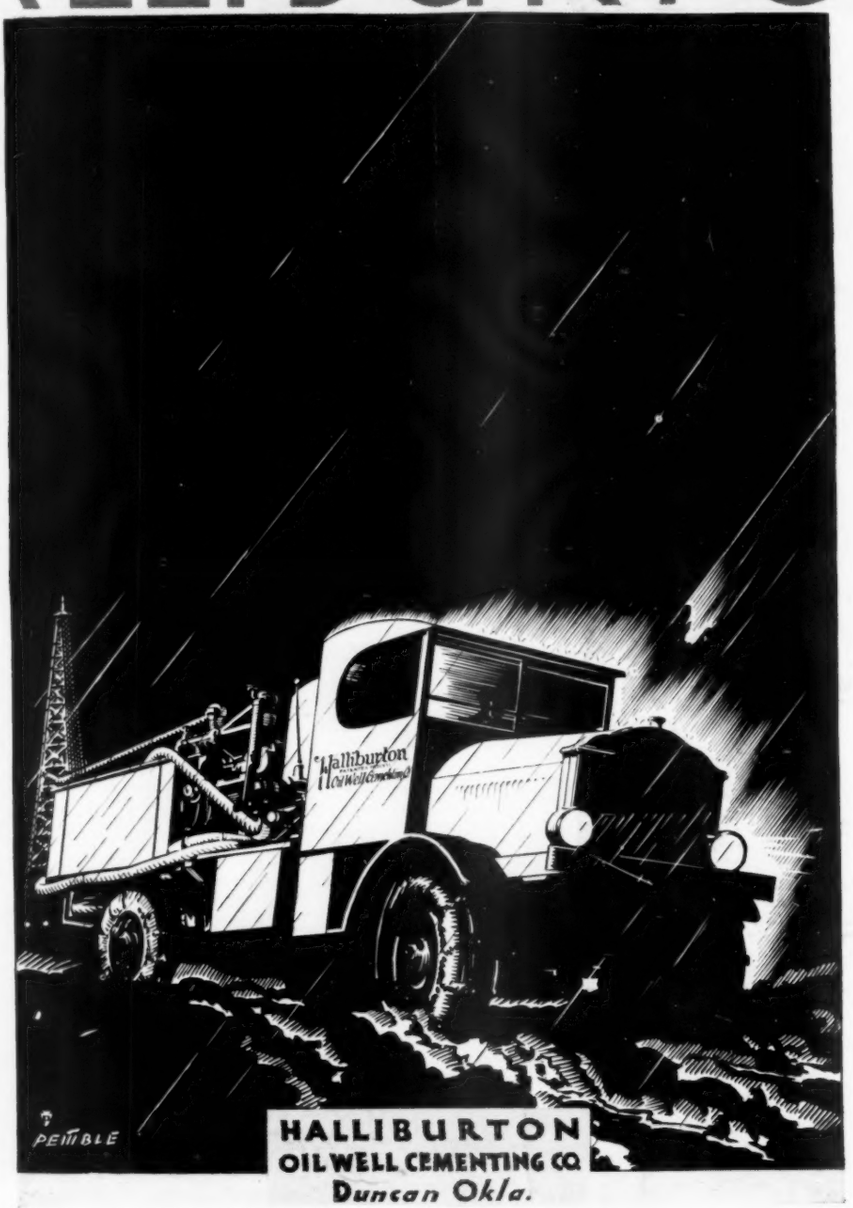

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Neither storms nor roads are allowed to interfere.

To hang out a shingle and announce "Service for Sale" is an easy matter. To maintain, year in and year out, such high and inflexible standards as Halliburton has established, requires resources, integrity and organized responsibility.

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